Table of Contents

Microeconomics

1-Basic Economic Principles

1. Answer: E

Economics is a subject deal with the scarcity, limited resources fit to unlimited wants. It happens in individual, firm, and country. Economic thinking needs to be rational. So, choice E is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

2. Answer: E

Economics predicts people's behavior under the assumption that all people are rational and always make decision based on comparing the marginal changes in benefit and cost.

3. Answer: C

The firm spent $1 million building this store two years ago, so this building cost has been a past cost. Hence, whether the owners of this store sell it or change the nature of the business they do in this store, this building cost should not be considered into evaluation. The owners can get $3 million if they sell this store, but they are considering changing the nature of the business they do in the store, so they can not sell their store for $3 million. Therefore, the relevant cost to include in their evaluation is $3 million, which is the opportunity cost of changing the nature of the business.

4. Answer: A

People buy shares of a company because they expect a share means an ownership. If you own 10% share of a company, then 10% of the profit, or loss, generated of the company will be on your account. People would by shares of firms that can generate profits at a low rate.

For B, share price can be rising because its demand rises. It’s like an inflation, where price of the share increases but the fundamental value of a company stays the same.

For C, no one can guarantee other behavior as people evaluate a share differently.

For D, people value shares differently and investors don’t make an agreement.

5. Answer: B

The opportunity cost of something is the value of the best alternative of that thing that will be discarded. Producing 1 pound of hamburger means Sarah should give up producing 5 pounds of salads could be produced, which is the opportunity cost.

6. Answer: A

PPF refers to the maximum level of combination of two goods that one economy can achieve when using existing resources in full. There are trade-offs between the production of two goods (A and B for example), To gain one more unit of good A, the economy has to give up some units of good B. The amounts of good B that the economy gives up is the opportunity cost of producing this unit of good A, representing by the slope of PPF. PPF refers to the productive potential of an economy, not related to income, production methods, and market price. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

2-Supply and Demand

7. Answer: D

As the income increase, keep other things constant, income is the only influence on the demand for the expensive cars. Choice D is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

8. Answer: B

The US government lifted import restriction on sugar-based ethanal from foreign countries, which will cause the supply of ethanol-based fuel, which includes corn- and sugar-based ethanol, to increase. (Credit to Wenbin Zheng from HD Qingdao Wanda School)

9. Answer: E

A shift from D1 to D indicates a decrease in demand. Choices A, B and C increase demand, and choice D increases supply. In choice E, when the price of a substitute good decreases, the demand for avocados decreases.

10. Answer: B

The original equilibrium point is at (Q2, P2), according to the graph. The new equilibrium is moved to (Q1, P1). From the graph, we can derive that this can only be caused by a shift of supply curve from S1 to S, which is a decrease in supply. From A to E, only B can explain a decrease in supply curve. Hence B. (Credit to Jerry Jin from Wuhan Britain-China School)

11. Answer: B

Inferior goods refer to the goods in which whose income and substitution effects work in opposite directions. The substitution effect for an inferior good would be as same as that of a normal good. However, the income effect of an inferior good would be opposite to normal good. (Credit to Jerry Jin from Wuhan Britain-China School)

12. Answer: B

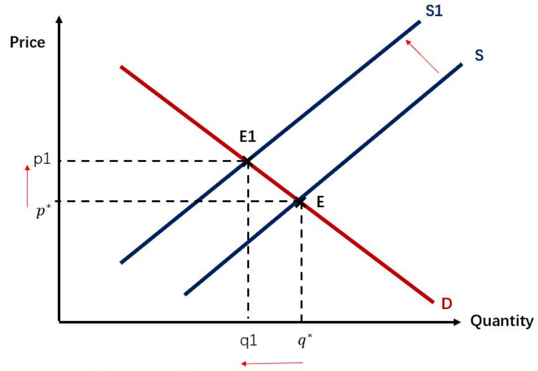
The income effect is larger than substitution effect. When the price of a Giffen good increases, the income effect causes the quantity demanded to increase because it is an inferior good. When the price of a Giffen good increases, the substitution effect causes the quantity demanded to decrease by a small amount. (Credit to Juliet Sun from Wuhan Britain-China School)

13. **Answer: C**

Q^s=3p-120, Q^d=400-2p, so P^c=104, Q^c=192.
When there is tax on buyers: Q^s=3p-120, Q^d=400-2(p+60), so Q=120, P^s=80, P^b=140.
Buyers burden: 140-104=36. Producers burden: 104-80=24.

14. Answer: A

The tax government charge is per unit tax (specific tax), which will shift the supply curve of blue jeans to the left (from S to S1), leading to a rise in price of blue jeans (from p* to p1) and fewer quantity traded of blue jeans (from q* to q1) as shown in below diagram. The market equilibrium will change from E to E1. (Credit to Zhiqiang Ma from ULink College of Suzhou Industrial Park)



15. Answer: B

Profit maximization happens when MC=MR. Since the fixed cost increases, not the variable cost, the marginal cost and marginal revenue are still the same. So, according to profit maximization rule: MC=MR, Carla's Candy Store should still produce 1,000 pounds. (Credit to Li Zhang from Guangdong

Experimental High School AP International Curriculum)

16. Answer: B

For the quantity of gasoline sold to increase, either supply or demand must increase, all else equal. A fall in the price of automobiles decreases the price of a "complementary good," a factor that increases the demand for gasoline. An increase in the price of crude oil will decrease the supply of gasoline. A decrease in consumer incomes will reduce the demand for gasoline. An increase in taxes on gasoline will decrease both the supply and demand of gasoline.

3-Market Equilibrium

17. Answer: A

Only given that the supply decreases and the demand increases, we can know nothing about the goods' change in quantity traded, but there must be an increase in price.

18. Answer: B

Because the supply and demand both increase, it is impossible to tell the change in price if we do not know how much demand and supply increase, but the quantity will definitely increase. (Credit to Benson Yang from Wuhan Britain-China School)

19. Answer: C

Price decrease by $2, the quantity of demand increases 10 units, the quantity of supply decrease 20 units, and the shortage is 30 units. Choice C is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

20. Answer: B

Price of gasoline and quantity of gasoline increased, indicating the demand curve shifted to the right.

21. Answer: D

A is incorrect since the market equilibrium is at the intersection of S and D, i.e. $2.50 and 600. B and E are incorrect because if $5.00 is a price ceiling then it is ineffective, leaving the market price at the equilibrium level of $2.50 and quantity 600. C is incorrect and D is correct because if $5.00 is a price floor then it is effective, and the market price will have to move up to $5.00. Quantity demanded 500 is the quantity traded and there will be a 200-unit excess supply which is not traded. (Credit to Wenbin Zheng from HD Qingdao Wanda School)

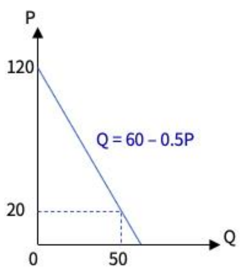
22. Answer: C

A price floor of $10 is effective because 10>8 (equilibrium price without price floor). At price of 10, Qd=2 while Qs=8, therefore there would be surplus of 6 (=8-2) pairs of socks, which is unsold. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

23. Answer: A

Consumer surplus=the price you are willing and able to pay - actually pay. If there is consumer surplus, the price of the good is less than the highest price you are willing and able to pay for the good. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

24. Answer: D



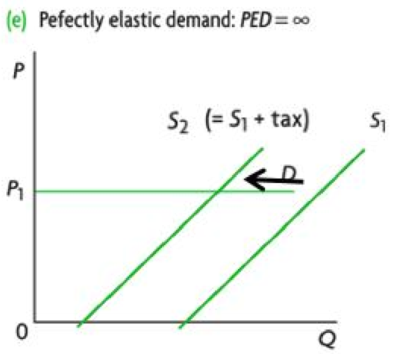
Based on the market demand function, we can know: when Q = 60 - 0.5P = 0, P = 60/0.5 = 120; when P = 20, Q = 60 - 0.5*20 = 50; so, we can draw the graph. According to this graph, if P equals 20, the value of the consumer surplus = (120 - 20)*50/2 = 2,500.

25. Answer: C

Price control includes maximum price and minimum price control. If imposing effective maximum price (below equilibrium price), the Qd > Qs, excess demand occurs. If imposing effective minimum price which is above equilibrium price, Qs >Qd, surplus occurs. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

4-Elasticity

26. Answer: C



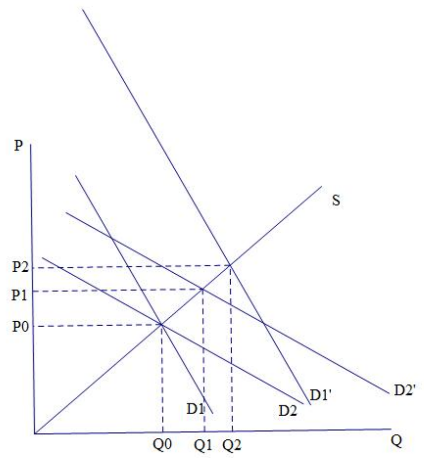
Tax will shift supply curve upwards/leftwards. With perfectly elastic demand, price will be held constant at P1 regardless of the shift of supply.

27. Answer: D

This is a situation where 2/3 of the tax burden is paid by consumers and 1/3 for producers. Neither demand nor supply is perfectly elastic or inelastic. The demand should be more inelastic than the supply.

28. Answer: C

Since price elasticity of demand is the responsiveness of percentage change in quantity to the percentage change in price. Elastic demand will have a flatter demand curve while inelastic demand will have a steeper demand curve. Hence, for the same amount of shift for a demand curve, a flatter curve (elastic demand) will lead to a smaller increase in price and a smaller increase in quantity demanded. As follow: (Credit to Jerry Jin from Wuhan Britain-China School)



29. Answer: C

If the demand for a loaf of bread is 1.3, it means that consumers are sensitive to the change of price, so if price decrease a little, the quantity of demand will increase a lot, resulting in an increase in total revenue.

30. Answer: C

Elasticity is defined as the change in quantity against a change in price. So given that elasticities of demand and supply are not perfectly elastic, when elasticities of demand and supply increase, there would be greater in change in the 2 quantities, and therefore greater deadweight losses (perfectly elastic supply & demand result in 0 deadweight loss).

31. Answer: A

Because they have the same elasticities, and the unit sales of B fall dramatically, it can be inferred that the elasticity of supply for A is much smaller than B. In this case, producers will share a bigger burden the tax burden than producers of B. (Credit to Mike Li from Wuhan Britain-China School)

32. Answer: A

‘estimate how responsive bagels are to a change in cream cheese prices’ indicates that cross elasticity of demand (XED) will be calculated. The formula of XED = % change in quantity demanded of A/% change in price of B. Here, cross elasticity of demand of bagels in terms of the price of cream cheese =[(New quantity of bagels -original quantity of bagels)/original quantity of bagels] / [(New price of cream cheese - original price of cream cheese)/original price of cream cheese]. Therefore, Choice A (Percentage change in bagel price) is not included when calculating. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

33. Answer: C

This question checks the relationship between price elasticity of demand (PED) and total revenue. When PED <1, demand is price inelastic, which means consumers are less sensitive to price change or the percent change in quantity demanded will be less than the percent change in price, vice versa. Therefore, When PED>1, lower price leads to higher revenue; when PED<1, higher price leads to higher revenue. When PED=1, total revenue will remain unchanged no matter how price changes. C is correct. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

34. Answer: C

If XED>0, then these two good are substitutes. Besides, if 0<XED<1, weak substitutes; if XED>1, close substitutes;
if XED <0, these two goods are complements. -1<XED<0, weak complements; XED<-1, close complements;
If XED=0, these two goods are not related.
C is correct. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

35. **Answer: B**

Time is a determinant of PED, PED will be more elastic when there is more time for travelers to look for other options.

36. Answer: D

Because the cost of producing the good X decreases, the supply of the good X will increase, and the price of good X will decrease. According to the law of demand, the quantity demanded for good X will increase. From the question, we know that the revenue of good X increases, so the demand for good X is price elastic.

37. Answer: B

When a tax is imposed, the cost of production of fur coats would increase thus the supply curve shifts to left, leading to increase in price. The demand for fur coats is likely to be price elastic because the spending on fur coats usually accounts for a greater proportion of income. Consumers would be sensitive to the increase in price. Therefore, increase in price of fur coats would lead to a large decline in the sales of fur coats. B is correct.

For A, the tax revenue won't increase by a large amount because the quantity decreases by a larger proportion than the increase in price.

For C, tax on fur coats is one indirect tax, which affects all of the buyers, regardless of the rich or the poor.

For D, because of price elastic demand, the producers cannot pass on the tax burden to buyers though raising price.

(Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

5-Market Efficiency and Social Welfare

38. Answer: C

Network externality describes how the demand for a product is dependent on the demand of others buying that product.

39. Answer: B

Public goods are non-excludable, so it is not limited to the consumers who purchased it. Hence, private companies will not make any profit to produce it, hence it is underproduced by the free market.

40. Answer: E

Market failure is inefficient allocation of resources by the free market. In other words, the equilibrium price and quantity determined by the market failing to reach the socially optimal point. If a market has significant external costs, it will produce more than the socially demanded amount, i.e., the efficient amount, and result in a price that is less than the price that would occur in an efficient market.

41. Answer: D

Rivalry in consumption is the property of a good whereby one person’s use diminishes other people’s use. Because this museum is not crowded, a person might not be prevented from entering this museum by other people in normal situations.
Excludability is the property of a good whereby a person can be prevented from using it. People entering this local museum will be charged an admission fee, so people who refuse to pay the fee cannot enter the museum.
Therefore, attending this local museum is a nonrival, but excludable good.

42. Answer: D

Where a **tax** increases linearly, the deadweight loss increases as the square of the tax increase. This means that when the size of a tax doubles, the base and height of the triangle double. Thus, doubling the tax increases the deadweight loss by a factor of 4. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

43. Answer: D

Because MSB=MPB+MEB (marginal external benefit) and Flu shots are associated with a positive externality (MEB>0), MSB>MPB. MPB is the private demand curve and MSB is the social demand curve. Without government intervention, the firm will produce at Qmkt when MPB=MPC with their own interest, while the social optimum output is Qs when MSB=MSC. Therefore, the current output level is inefficiently low (Qmkt<Qs). To solve the inefficient situation, government could give per-shot subsidy to firms so that supply curve shift rightwards (MSC shift down). (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

44. Answer: A

A firm is said to be productively efficient when it is producing at the lowest point on the short run average cost curve (this is the point where marginal cost meets average total cost). A is correct. Choice B (an increase in production will decrease average total costs) refers to economy of scale, while Choice C (output per worker) refers to productivity. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

45. Answer: A

Misallocation of resources causes the inefficient production in multiple industries. Also, the mismatch isn’t likely to complement each other. Therefore, this immobility, inability to self-adjust, requires government to intervene. (Credit to Herui Chen from HEFEI NO. EIGHT SENIOR HIGH SCHOOL)

46. Answer: D

Sales tax is indirect tax which is regressive, the high-income earner pays lower percentage than low -income earner. Jennifer: (40000*10%)/ 50000=8%, Steve: ($27,000 *10%)/ 30,000=9%.

47. **Answer: A**

The $700 price ceiling is not binding, and as a result, it has no effect on this market. The market price is $500, and the quantity sold is 500.
Consumer Surplus: (900-500)*500*1/2=100,000
Producer Surplus: 500*500*1/2=125,000
Deadweight loss: 0
Therefore, the correct Answer: is A

48. Answer: D

Free-riders mean that someone does not pay for the good when they consume. Thus, free rider problem usually results from the non-excludability of the public good. The producer of the good has not enough incentive to produce the good, since they cannot charge the price directly from consumers. Therefore, without government intervention, public goods will not be under provided by producers. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

49. Answer: C

After imposing taxation, the equilibrium quantity will be lower, thus there will occur deadweight loss. Consumers and producers will loss both tax and deadweight loss. As a result, losses to buyers and sellers exceed the tax revenue. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

50. Answer: C

A complete market failure exists when free markets doesn't supply the good at all. (Credit to Hongyi Wang from Shanghai United International School, Gubei Campus)

6-Firm Behavior and the Organization of industry

51. Answer: D

The Marginal Revenue Product is the product to Marginal Product and Marginal Revenue. The fifth unit of labor increases has a marginal product of 66-56=10 and a marginal revenue of constant 10, resulting in a MRP of 100.

52. Answer: C

The profits for employing employers are as follows:
One worker: profit=10*10-58*1=$42, Two workers: profit=22*10-58*2=$104
Three workers: profit=36*10-58*3=$186, Four workers: profit=56*10-58*4=$328

Five workers: profit=66*10-58*5=$370 **(maximum),** Six workers: profit=70*10-58*6=$352

Seven workers: profit=71*10-58*7=$304. Hence, C.

53. Answer: C

When the workers number is 3, the gross profit is the highest which is 25*$1-3*9=$8. When the workers number is 1,2,4,5, it will be $1, $7, $7 and $3 respectively. (Credit to Nicole Zhu from Wuxi Boston International School)

54. Answer: B

The average total cost making 499th pizzas is $3.30, the marginal cost of the 500th is $3.00, which is lower than the average total cost. So, the average costs are falling at Q=500. (Credit to Mike Li from Wuhan Britain-China School)

55. Answer: B

This is a perfectly competitive market, hence the demand curve is not a downward sloping curve, so A cannot be derived. In a perfectly competitive market, price is equal to the minimum ATC of the market. Therefore, market price would not fall to $0.75. D is incorrect. As for C, we cannot calculate the exact quantity at $0.75, so total profit is ambiguous. (Credit to Mike Li from Wuhan Britain-China School)

56. Answer: D

If all firms have the same costs of production, then it is a competitive market. So, in long-run equilibrium, all firms have normal profit (which is zero profits) and just cover their opportunity costs. (Credit to Mike Li from Wuhan Britain-China School)

57. Answer: C

Implicit costs refer to those not directly visible (opportunity costs) when calculating profit. '$15,000 for office rent, $3,000 for equipment rental, $1,200 for utilities, and a $35,000 salary, expenses by cashing in a $20,000 certificate of deposit '' are explicit cost. implicit costs include salary of $90,000 and annual interest of $1,000 that is forgone. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

58. Answer: D

The question should compare the revenue and costs that are generated from buying a shield or a new drill.
Situation 1: If The radio station could put up a shield at a cost of $30,000, then the net benefit from it=$10000 of future profit - $30000 of cost of shield = -$20000;
Situation 2: if the dentist could buy a new drill, the net benefit for the radio station = $10000 of future profit - 0 of cost=$10000;
Situation 3: if the radio station pays for the new drill, the net benefit for the radio station = $10000 of future profit - $6000 of cost=$4000.
Compare these three situations, it's better that the dentist gets a new drill and it does not matter who pays for it. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

59. Answer: D

In an increasing-cost industry, the firm’s production costs increase with the size of industry and the long-run industry supply curve is upward sloping. When existing firms in a perfectly competitive industry are earning economic profits, it will attract new firms entering the industry in the long run. As the size of industry increases, the firm’s production cost curves shift upward.

60. Answer: A

$Q^d=60-P$

$Q^s=3P$

We get $Q^d=Q^s=45$, P=15, which is the market quantify produced and price charged. Because each firm is identical, we can tell that this is a perfect market.

Firms will produce at MC=MR=P.

Given MC=3Q, P=MC=15, so Q=5.

61. Answer: C

Total Fixed Cost = Total Cost - Total Variable Cost

= (Average Total Cost - Average Variable Cost) x Quantity

= ($10-$6) x 1000 = $4000

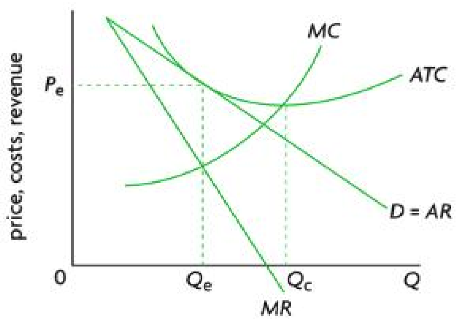
Therefore, C is correct answer. (Credit to Mingming Qian from Xiang Jiang International High School)

62. Answer: C

In competitive industry, each firm can only make normal profit in long run. So, in short run when firms cannot cover their total cost and the economic profit would be less than 0, some firms would shut down in SR. As some firms leave the market, the market supply of the good decreases, so the market price increases till P=ATC in the long run. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

7-Market Structure

63. Answer: C



A company in a monopolistic competition, would produce an output of Qe where MC=MR to maximize profit. At Qe, consumers are willing and able to pay a price Pe shown on demand curve. Since Pe>MC at Qe, allocative inefficiency occurs.

64. Answer: C

In perfect competition, firms can only sell the goods at a constant market price, which is equal to MC=10. However, after the cartel, firms together act like a monopoly and have the power to control price. Their profit can be given by: Profit=Q*(Price-Cost) where the demand function shows Q=100-P. Thus, Profit=(100-P)*(P-10)=-P^2+110P-1000. At P=55, Profit is maximized. The change in price is 55-10=45.

Another way of doing so is by using the MR curve. At a certain price, Quantity on MR curve is half of the quantity of Demand curve. Thus, Q=(100-P)/2. When MR intersects with MC=10, the quantity would be 45. On the demand curve, the quantity corresponds to a price of 100-45=55. The change in price is 55-10=45.

65. Answer: A

The profit-maximized quantity is always determined by where marginal revenue equals marginal cost, which is 100. The price is always determined using the demand curve. The associated price of a quantity of 100 is 20 dollars.

66. Answer: D

Marginal revenue is the change in total revenue brought about by selling an additional unit of good, so A, B, C, E are not correct. When a monopoly increases production by 1 unit, it must reduce the price it charges for every unit it sells, and this cut in price reduces revenue on the units it was already selling, so D is correct. A monopolist’s marginal revenue can be negative because when the firm produces an extra unit of output, the price may fall by enough to cause the firm' s total revenue to decline, even though the firm is selling more units. Hence, B is incorrect.

67. Answer: B

Monopolistic competition is neither allocative nor productive efficient, so it does not produce at the lowest ATC nor at quantity of AR = MC.

68. Answer: A

When Brian charges a low price, Matt can earn $1500 when charge low while earn $200 when charge high. When Brian charges a high price, Matt can earn $5000 when charge low while earn $4000 when charge high. In both case Matt can earn more when he charges a low price. Therefore, his dominant strategy is to charge a low price. On the other hand, when Matt charges a low price, Brian should charge a low price; when Matt charges a high price, Brian should charge a high price. Therefore, Brian doesn' t have a dominant strategy. (Credit to Jerry Jin from Wuhan Britain-China School)

69. Answer: A

As firms in the market are earning economic profit, more firms will join the market, thus attract some consumers from existing firms, lowering their demand. As there are more firms, the demand gets more elastic as consumers have more choices. (Credit to Jason Zhang from Shanghai United International School, Gubei Campus)

70. Answer: C

For a monopoly firm, the price is higher than the minimum ATC, while in a competitive market, the market is efficient, hence the price is equal to the minimum ATC. While in both countries the minimum ATCs are the same, the price in the Belgium is higher than that of Canada. (Credit to Jerry Jin from Wuhan Britain-China School)

71. Answer: A

Because in other to achieve dominant strategy, firms will experience loss when other firms are charging low prices. Thus, they need to collusion to set the same price. (Credit to Benson Yang from Wuhan Britain-China School)

72. Answer: A

MR=MC is the profit maximization point and MR=0 is the revenue maximization point. Since there is no marginal cost, the revenue maximization point is the same as the profit maximization point.(Credit to Jason Zhang from Shanghai United International School, Gubei Campus)

73. Answer: D

The equilibrium in game theory is called Nash equilibrium. In a Nash equilibrium, no player has incentive to change its strategy. (Credit to Jason Zhang from Shanghai United International School, Gubei Campus)

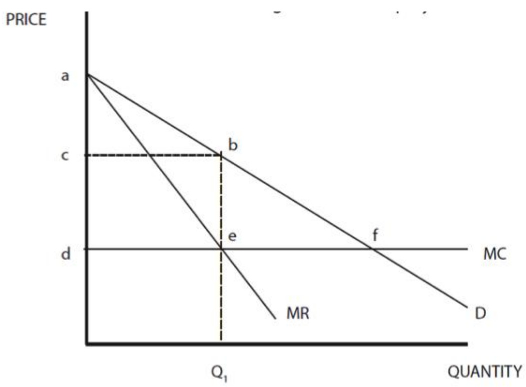
74. Answer: C

Marginal cost is calculated by 60 - 40 = 20. Only option C satisfied.

75. Answer: A

Option A provides the reasons why the statement is false. In fact, all rational choice makers in all firms consider cost and benefit of production.

76. Answer: C



P = 20-Q, linear pricing: MR=20-2Q. Profit-maximizing output level: MR=MC=20-2Q=10, Q=5. So, the price is 20-5=15. The profit of linear pricing (area bcde in the graph) =(15-10)*5=25.
Perfect price discrimination: output level: P=MC, Q=10. Profit= area adf in the graph =0.5*(20-10)*10=50.

77. Answer: E

This graph depicts the costs and demand curve for a typical natural monopoly. The profit-maximizing quantity produced by a monopoly is always at the intersect of its marginal revenue and marginal cost, which is Q0, while the price will correspond to this quantity according to the demand curve, P2.

78. Answer: D

These firms belong to an oligopoly market. Their sales strategies affect each other because of the competition between the sellers, but the prices of the products may not be the same. Sellers may not make a profit.

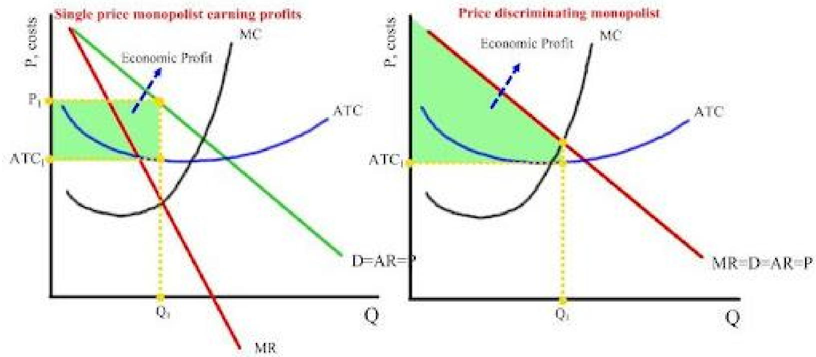
79. Answer: C

Firms choose the profit-maximizing quantity at which MR=MC. Since MC is greater than 0, MR must also be positive. This means the elastic region of demand curve under this quantity.

80. Answer: A

Since it is the firm that will maximize the profit and minimize cost:
It will produce at MR=MC.
It will hire at MRP=MFC.
$P=40-Q.$
$TR=P*Q=40Q-Q^{\wedge 2}$
$MR=d(TR)/d(Q)=40-2Q$
$Q=3L$
$MPL=d(Q)/d(L)=3$
$MC=MFC/MPL=30/3=10$
$10=40-2Q,\ Q=15,\ L=Q/3=5$

81. Answer: C



As shown in the diagram above, with price discrimination, the monopoly firm earns higher total economic profits. With perfect price discrimination, every consumer is charged the price that he or she is willing to pay at maximum, rather than the price at which marginal revenue equates marginal cost. Since all available consumers are charged a relatively higher price and the firm' s cost hasn' t changed, total profits increase. Therefore C. (Credit to Hongyi Wang from Shanghai United International School, Gubei Campus)

82. Answer: A

If the product price is above the equilibrium, a surplus is likely because sellers offer more for sale at that price than consumers are willing to purchase. Normally, the surplus pushes prices downward to equilibrium and eliminates the surplus. In this case, the law sets a minimum price above the equilibrium and the surplus remains. No factors shifting supply or demand are present in this question, thus eliminating the last two options.

83. Answer: B

Since there are infinitely many producers and all products are perfectly substitutable, a producer who raises its price to above the market price will face zero sales. Since there are infinitely many buyers in the market, a producer can sell any finite quantity it wishes to at the current price, giving it no incentive to drop the price below the market price. Therefore, competitive firms take the market price and do not deviate from it. (Credit to Hongyi Wang from Shanghai United International School, Gubei Campus)

84. Answer: A

Students need to know that MR is the slope of TR, since TR is linear, MR must be a constant. Thus, it is a perfectly competitive firm. Profit = TR-TC, hence profit-maximizing quantity is at Q3.

8-Economics of Labor Market

85. Answer: B

Value of the marginal product of labor equals that price times quantity of marginal product. (Credit to Juliet Sun from Wuhan Britain-China School)

86. Answer: C

Labor demand is a derived demand. If there is no demand for the goods and services, there is no demand for labors who produce this type of goods and services. (Credit to Juliet Sun from Wuhan Britain-China School)

87. Answer: D

Because the firm is currently producing at the profit-maximizing output level, MRP=MFC. And the firm hires worker from a perfectly competitive labor market, thus MFC=W=$16. And the X' s industry sells X in a perfectly competitive market, MR=P=MC=$0.5. And we know that MRP=MR*MP, thus MP=MRP/MR=MFC/MR=W/MC=32 units per hour.

88. Answer: D

In order to minimize costs when utilizing multiple resources in the production process, a firm will hire workers and rent robots where the marginal product per price is equal for both resources (MP/P workers = MP/P robots).

89. Answer: C

Cost of a labor here means the wage rate of this labor and marginal cost of labor here means wage rate of the next worker hired. In a perfectly competitive labor market, supply of labor is perfectly elastic, both firms and labors are price takers, so marginal cost of labor should be equal to the average cost of labor.

9-Theory of Consumer Choice

90.Answer: E

Adverse Selection happens in insurance because buyers of insurance have more information on their own conditions than sellers. For example, people with dangerous jobs are likely to purchase life insurance.

91.Answer: A

The fact that diamonds are more expensive than water is mostly driven by demand and supply. A higher marginal benefit on every incremental unit supplied thus indicates a higher price.

92.Answer: D

Rational people stop a behavior when its marginal cost exceeds its marginal benefit. An increase in marginal cost of staying at home above its marginal benefit will make the parent to find another job.

93.Answer: B

For travel by plan, there are 44 hours saved. Compare with hours spent by bus, the additional cost is 440 (600-160=440, 440/44=10 per hour). Hence, Choice B is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

94.Answer: B

A lower marginal utility means that consumption of the goods has increased, hence she is better off in her new situation.

95. Answer: A

$$MU1 = d(x_1^{0.5}x_2^{0.5})/d(x_1) = 0.5x_1^{-0.5}x_2^{0.5}$$
$$MU2 = d(x_1^{0.5}x_2^{0.5})/d(x_2) = 0.5x_1^{0.5}x_2^{-0.5}$$

So current $\frac{MU1}{MU2} = \frac{0.5x_1^{-0.5}x_2^{0.5}}{0.5x_1^{0.5}x_2^{-0.5}} = x_2/x_1 = 3/4$

The above equations show marginal equations of good 1 and good 2. The slope of budget line=P1/P2=2/5. When the utility is maximized, MU1/MU2 should be equal to P1/P2, so MU1 should decrease and MU2 should increase. Since marginal utility is decreasing, the consumer should buy more x1 and less x2.

This is a higher level question testing students' understanding of consumer utility as well as its mathematical presentation. Most of students taking AS level have already learnt basic Calculus, and this is one simple application of most basic derivative.

96. Answer: D

The total prices of option A, B, and C are higher than the budget constraint. Option D generates a higher total utility than E.

Macroeconomics

1-Basic Concepts

1. Answer: A

Pareto efficiency is also called Pareto optimal. If the allocation is Pareto-efficient, then you cannot make anyone better off without making someone else worse off. In other words, if the allocation is Pareto-efficient and you want to make a person's life better, another person's benefits will be hurt. For example, assume a society is Pareto-efficient and a poor person is starving to die. If a rich person can give a cheap meal to this poor person, this poor person will not die. In this situation, the welfare of this poor person will be largely improved. However, because this society is Pareto-efficient, giving a meal without any paybacks will hurt this rich man's benefits. Thus, a Pareto-efficient society may also exist very rich people and very poor people, so Pareto efficiency does not mean that everyone is satisfied with its current situations or this society is very fair.

2-GDP and Economic Growth

2. Answer: E

GDP (Y) = S + C + G, so S = Y - C -G or S = (Y - T - C) + (T - G). (Y - T - C) represents private saving, while (T - G) represents public saving. Thus, S = private saving + (T - G). In a closed economy, GDP (Y) = C + S + G = S + C + G, so I = S = (Y - T - C) + (T - G). If the government is running a budget deficit of $100, it means (T - G) = -100. Investment (I) is $300, so I = S = (Y - T - C) + (T - G) can become: 300 = S = private saving + (-100) = private saving - 100, so private saving = 300 + 100 = $400.

3. Answer: B

As Honda is made in Japan, it is a part of GDP for Japan not for US
Choice B is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

4. Answer: E

Positive spending multiplier effect results in the total change in national income that results from an increase in government spending. GDP = C + I + G + (X - M). The government spending is an injection in the circular flow of income. The government tends to spend on goods and services, such as public and merit goods, therefore, households will have more money to consume, GDP will increase by more than $1 million. (Credit to Nicole Zhu from Wuxi Boston International School)

5. Answer: A

Aggregate demand (AD) that is real GDP consists of four components, AD=C(Consumption)+I(Investment)+G(Government spending)+Net exports(X-M), when private investment increase by $50 billion while GDP remained the same, there should be a decrease of Consumption(C) by $50 billion or a decrease of Government spending(G) by $50 billion or a decrease of Net exports by $50 billion(that is export decrease by $50 billion or import increase by $50 billion) to keep real GDP constant. (Credit to Zhiqiang Ma from ULink College of Suzhou Industrial Park)

6. Answer: A

GDP deflator in 2019= (Nominal GDP in 2019/Real GDP in 2019)*100 = (220/200)*100 = 110
GDP deflator in 2020 = (Nominal GDP in 2020/Real GDP in 2020)*100 = (240/205)*100 = 117
Inflation rate = (GDP deflator in 2013 - GDP deflator in 2012)/GDP deflator in 2012 = (117-110)/110 = 6%

3-Cost of Living

7. Answer: B

Demand-pull inflation is the upward pressure on prices that follows a shortage in supply. Economists call it "too much money chasing too few goods".

When the productivity growth rate is high, a shortage in supply is less likely to occur, so A is not the right answer.

Potential gross domestic product (GDP) is defined as the level of output that an economy can produce at a constant inflation rate. When there is a positive output gap, it means that the real GDP exceeds the potential GDP, which reveals a shortage in supply, so B is the right answer.

When there is an increase in the rate of interest, people will tend to save their money in banks, instead of consuming, so a shortage in supply is less likely to occur. Thus, C is not the right answer.

8. **Answer: D**

Leading economic indicators are used to forecast changes before the rest of the economy begins to move in a particular direction and help market observers and policymakers predict significant changes in the economy. Producer Price Index (PPI) tracks changes to the cost of production. Changes in PPI will result in the change of CPI. The reason is that the price index of means of production, the price index of means of living and the price index of raw materials, fuel and power all lead to the change of CPI. Therefore, PPI can be used as the leading index of inflation rate.

9. **Answer: D**

Substitution bias arises if consumers change their purchasing behavior in response to relative price changes. Economic theory predicts that an increase in a good's price will cause consumers to reduce their purchases of that good and instead purchase a substitute with a relatively lower price. In this case, CPI overestimates the inflation rate. (Credit to Bin Liu from Beijing Etown Academy)

10. **Answer: A**

As real interest rate equals nominal interest rate minus inflation rate. When unexpected inflation occurs, the inflation rate goes up, real interest rate goes down, the interest the savers obtain decrease. So, Choice A is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

4-Income Inequality and Unemployment

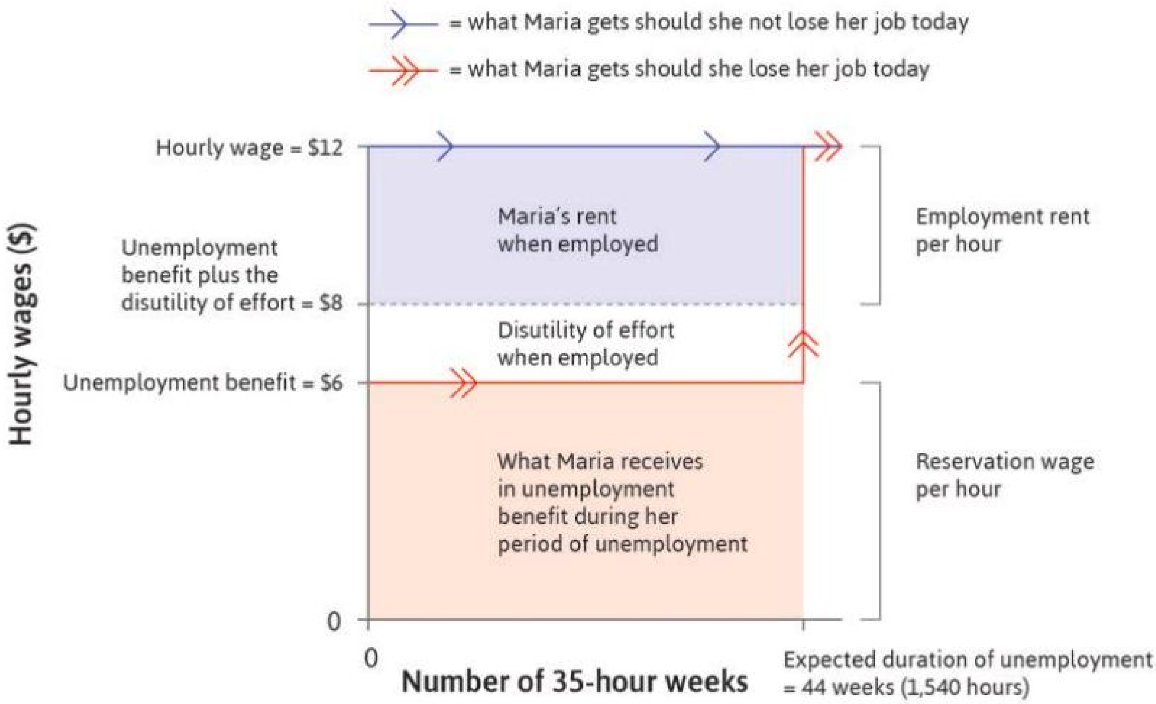
11. **Answer: C**

Structural unemployment: unemployment that results because the number of jobs available in some labor markets is insufficient to provide a job for everyone who wants one. It may exist even when the economy is growing very well.

Cyclical unemployment: periodic unemployment caused by fluctuations in the business cycle. It is closely associated with the short-run ups and downs of economic activity. When there occurs cyclical unemployment, it usually reveals the appearance of recession, so monetary policies and fiscal policies are more likely to be used in this situation to decrease the influences of recession. When the economy is becoming better, cyclical unemployment rate may decrease a lot. Therefore, compared to structural unemployment, cyclical unemployment may be responsive to policies.

12.Answer: D

The disutility of work is that utility is reduced by the unpleasantness of going to work and working hard all day. Employment rent (economic rent) is that the economic rent a worker receives when the net value of his or her job exceeds the net value of his or her next best alternative. reservation wage (transfer earnings) is that the amount of income someone will get in alternative employment or from unemployment benefits if not in his or her current job. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)



In this question,

▪Maria' s Employment rent per hour = wage - unemployment benefit - disutility of effort + disutility of unemployment = 12 - 6 - 2 + 1 = $5, A is wrong

▪ Maria' s reservation wage = unemployment benefit - disutility of unemployment = 6 - 1 = $5. B is wrong.

▪ If Maria gets a new job with a lower wage, her employment rent would be higher than $5.

C. If she is offered a job with the wage $11 and disutility of $0,5, her employment rent = 11-6-0.5+1=$5.5, she should take it.

D. If she is offered a job with the wage $14 and disutility of $3, her employment rent = 14-6-3+1=$6 >$5, she should take it. D is correct. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

13.Answer: B

A. Lump-sum taxes equal for all citizens increase inequality because lump sum taxes equal for all citizens have larger negative impact on the poor than the rich. A is wrong.
B. Endowments refer to talent or skills. Providing high-quality education to citizens will improve the labor productivity/talent, especially for the less well-off people because without provision, those less well-off people are more likely to drop from school and have less chance to receive high-quality education. B is correct.
C. An increase in the minimum wage may not necessarily increase unemployment. In monopsony, an increase in the minimum wage may decrease unemployment. C is wrong.
D. A non-compete agreement is a legal agreement or clause in a contract specifying that an employee must not enter into competition with an employer after the employment period is over. D is wrong. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

14. Answer: C

The Gini coefficient is a measure of the distribution of income across a population. A higher Gini index indicates greater inequality, with high income individuals receiving much larger percentages of the total income of the population. Progressive income tax is a tax for which high-income taxpayers pay a larger fraction of their income than do low-income taxpayers, so it will by itself decrease the inequality of income distribution, resulting in a low Gini coefficient of income distribution.

15. Answer: C

According to the Bureau of Labor Statistics (2021), Goods, excluding agriculture employment is 20,279.5 thousand. Employment in services was 126,457.4 thousand. Agriculture employment is 2184.8 thousand.
link:https://www.bls.gov/emp/tables/employment-by-major-industry-sector.htm

16. Answer: C

Natural rate of unemployment is the unemployment rate when the economy achieves full employment. In this situation, frictional unemployment and structural unemployment may exist, but cyclical unemployment does not exist. Thus, in this situation, individuals are unemployed because they need time to look for work or their skills cannot match new jobs quickly. Therefore, a new technology which can quickly match people unemployed with jobs in their fields can effectively reduce natural rate of unemployment, while approaches in A and B are more effective to decrease cyclical employment.

17. Answer: A

The unemployment rate is number of unemployed / labor force*100.

Labor force is total number of workers including both the employed and the unemployed. The discourage workers is not included in unemployed workers. In February, in U.S, the number of unemployed workers is 40,000, 760,000 working-aged adult were employed, the labor force is 760,000 +40,000=800,000, the unemployment rate of US in February is 40,000/800,000*100=5% In March, in U.S, the number of unemployed workers is 40,000-5,000=35,000 due to 5,000 person gave up to seek for job. So, the labor force in March is 795,000 (760,000 +35,000=795,000) the unemployment rate of US in March is 35,000/795,000*100=4.4%. Choice A is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

18. Answer: E

The free-trade policy and activity will boost the technology progress. The economy growth makes the firms willing to take on more workers so the natural unemployment rate goes down. Choice E is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

19. Answer: A

When there is a decline in unemployment rate, firms are competing more scarce resources like labors. Also, as production expands after the decrease in unemployment rate, firms are competing other resources like land and capital. This will raise the factor prices and thus cause inflation. (Credit to Bin Liu from Beijing Etown Academy)

20. Answer: D

The rational expectations theory posits that individuals base their decisions on three primary factors: their human rationality, the information available to them, and their past experiences. When there is an anticipated inflation, workers will demand higher wages to combat increases in prices of all goods and services. (Credit to Bin Liu from Beijing Etown Academy)

21. Answer: A

Net wealth is the total value of assets owned by a person, company or organization minus any current liabilities, so its value may be negative, while other three measures cannot be.

22. Answer: E

a): LF participation rate= LF/ adult population

if LF participation rate is low, which means employed + unemployed are low as well, people may not even look for jobs.
c): discouraged workers are counted as not in the LF.
d): natural rate of unemployment: frictional unemployment rate + structural unemployment rate.
e): productivity increases, labor demand increases and wage rate increases.

5-Aggregate Demand and Aggregate Supply

23. Answer: A

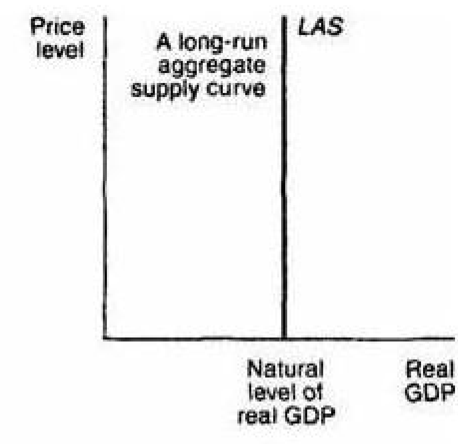
When businesses expect wages to increase, price level of goods and services will rise because the cost of human capital increases, which may result in a cost-push inflation. Therefore, the AS will shift from c to a.

24. Answer: A

Cost-push inflation happens when higher costs of production reduce AS, causing price level to rise. In the US in the 1970, due to rapid rises in oil prices, cost-push inflation (stagflation) persisted. (Credit to Wenbin Zheng from HD Qingdao Wanda School)

25. Answer: D

According to diagram as follows, LRAS is vertical as in the long run, all resources have been fully used up in most efficient way, the output is the potential output. (Credit to Cuiyan Tan from Guangdong Country Garden School)



26. Answer: D

The situation is a recessionary gap as the short run equilibrium in the economy has a real GDP lower than the potential GDP reflected by the long run aggregate supply curve. Under a recessionary gap, price level will be lower, resulting in a lower wage and production cost for firms. This will stimulate firms to increase their supply in the short run, thus create a boost in short run aggregate supply to push the economy back to its long run equilibrium while increasing the price level.

27. Answer: D

Because unemployment rate of the economy is above the natural rate of unemployment, there is overuse of resource, which increases the costs of inputs, thus the short run aggregate supply curve shifts to the left.

6-Business Cycle and Phillips Curve

28. Answer: B

The question asks for a factor that triggers a move along the Phillips curve, which means that factor must affects both inflation rate and unemployment rate. A short run increase in a country's aggregate demand achieves both.

29. Answer: C

A. The Bureau of Labor Statistics measures labor market activity, working conditions, price changes, and productivity in the U.S. economy to support public and private decision making
B. The Bureau of Economic Analysis (BEA) is a division of the U.S. federal government's Department of Commerce that is responsible for the analysis and reporting of economic data used to confirm and predict economic trends and business cycles
C. The National Bureau of Economic Research (NBER) has the responsibility of determining when a recession begins and when it ends.
D. The Office of Management and Budget oversees the implementation of the President's vision across the Executive Branch.
E. USA does not have such bureau. Business Cycle Analysis is reported by the Bureau of Economic Analysis. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

30. Answer: C

A reduction in interest rates may encourage people to consume more, instead of saving their money in banks, so deflation is less likely to occur.

A reduction in income tax may make people have more disposable income to consume, so deflation is less likely to occur.

A reduction in bank lending may discourage businesses to invest by using loanable funds, so deflation is more likely to occur in this situation.

31. Answer: A

When a country is experiencing capital deepening, it means that labors use more capital in production, so both the productivity and income of labor increase.

32. Answer: D

The Phillips curve traces a set of combinations of rates of unemployment and inflation: it can show the short-run trade-off between inflation and unemployment; in the long run, the Philips curve is a vertical line. Thus, a low expectation about inflation in the future will shift down the short-run Phillips curve.

33. Answer: D

The Phillips curve traces a set of combinations of rates of unemployment and inflation: it shows the short-run trade-off between inflation and unemployment. Thus, if the government want to reduce unemployment rate and inflations, the Phillips curve will shift to the left.

34. Answer: B

Stagflation means when SRAS decreases, there will be stagnation (decrease in real GDP) plus inflation. When there is an increase in oil prices, SRAS will decrease because that means there is an increase in commodity prices and costs of production. An increase or decrease in money supply will change AD, not SRAS. Technical progress will cause SRAS to increase, not to decrease. (Credit to Bin Liu from Beijing

Etown Academy)

35. Answer: D

The Phillips curve traces a set of combinations of rates of unemployment and inflation: it shows the short-run trade-off between inflation and unemployment: to expand employment, the government may adopt expansionary monetary policy which means greater money supply and higher risk of inflation. (Credit to Cuiyan Tan from Guangdong Country Garden School)

36. Answer: E

In a typical trade cycle, starting from a trough (the lowest point of economic performances), an economy is likely to subsequently experience a recovery (an upturn), a peak (highest point), and a recession (a downturn). (Credit to Wenbin Zheng from HD Qingdao Wanda School)

37. Answer: C

Asset price bubbles occur when the market price of an asset is greater than its fundamental value. It means that the asset is selling for more than it is actually worth. This happens when people have unrealistic expectation on value of goods. (Credit to Mingming Qian from Xiang Jiang International High School)

7-Monetary Market

38. Answer: C

A rise in interest rates is one of contractionary monetary policy. Higher interest rate will lead to higher borrowing cost, firms will borrow less and investment would decrease. Meantime, as GDP=C+I+G+NX, real GDP decline and unemployment rate rises. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

39. Answer: A

A. Interest rate reflects the price of money. Interest rate and Asset price are reversely related. For example, a government bond with a face value of $500 may carry a fixed interest rate of 5% of its issue price. If the price of the bond rises to $1,000, the interest paid will now represent 2.5% of the price of the bond. A is correct.

B. The Zero Lower Bound (ZLB) or Zero Nominal Lower Bound (ZNLB) is a macroeconomic problem that occurs when the short-term nominal interest rate is at or near zero, causing a liquidity trap and limiting the central bank's capacity to stimulate economic growth. Therefore, 'inability to set the real interest rate' is wrong, it should be 'inability to set the nominal interest rate to below zero'.

C. Quantitative easing (QE) is that a central bank purchases longer-term securities from the open market in order to increase the money. QE does not involve the central bank lowering its official interest rate. C is wrong

D. A currency union is where two or more countries or economies share a currency, such as, Eurozone. Interest rates can be set in European Central Bank. D is wrong. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

40.Answer: B

The rule of 72 is a simple formula that tells you the approximate amount of time or interest rate needed for an amount to double. The formula is Years * Rate per year = 72. In 2019, countries have equal GDP. However, GDP of the country X grows by 1% per year every year, while GDP of the country Y grows by 2%, the difference of GDP growth rates between two countries equals 1% (=2%-1%). According to the rule of 72, after 72 years (= 72/difference of GDP growth rates per year = 72/1), the GDP in country Y will be two times as the GDP in country X. Therefore, the correct Answer: is 2090.

41.Answer: D

Risk assets are assets that have significant price volatility, such as equities, commodities, high-yield bonds, real estate, and currencies. The ranking (from safest asset to riskiest asset): Deposit >Treasury bills > Common stocks of a company from S&P 500> Shares of a startup in Silicon Valley. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

42.Answer: B

A. Paying directly from your bank account, total amount = $1000

B. Credit at 0.1% compound interest per day, the only payment is at the end of the year, total amount=1000*(1+0.1%)^365=1000*1.44=1440; B is correct

C. Credit at 12% interest rate per year, the only payment is at the end of the year. Total amount=1000*(1+12%)=1120

D. Credit at 0.5% compound interest per month, the only payment is at the end of the year. Total amount = 1000*(1+0.5%)^12=1062. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

43.Answer: C

Federal Reserve District Banks is the central bank in America and has the same function as central bank. Making loans to the nation’ s largest corporation is the function of commercial banks. So, C is not true.

44. Answer: E

As the increase of investment is $150, Money multiplier = 1 ÷ Reserve ratio, therefore 1/20%=5, therefore $150*5=$750 GDP will increase by. (Credit to Nicole Zhu from Wuxi Boston International School)

45. Answer: C

The demand for loanable funds mainly comes from business investments, while the supply for loanable funds mainly comes from savings. When Congress passes an investment tax credit that encourages firms to increase their investment activity, there will be more firms borrowing money to invest, so the demand for loanable funds will increase. The borrowing costs of loanable funds are interest rates, so when the demand for loanable funds increases, the interest rates of loanable funds will increase, and high interest rates will attract more people to save money in banks. Therefore, savings will rise too.

46. Answer: E

Required reserve equals M1 deposit X reserve requirement ratio, hence equals $100,000 X 10% = $10,000. Since required reserve equals excess reserve, the actual reserve should be required reserve + excess reserve = $10,000 + $10,000 = $20,000. (Credit to Jerry Jin from Wuhan Britain-China School)

47. Answer: B

Monetarism refers to the theory or practice of controlling the supply of money as the chief method of stabilizing the economy. It emphasizes the role of governments in controlling the amount of money in circulation. Thus B. (Credit to Jerry Jin from Wuhan Britain-China School)

48. Answer: E

According to the equation of exchange, M (money supply) * V (velocity of money) = P (price level) * Y (real output/real GDP) = nominal GDP. Therefore, if velocity of money is constant, but the money supply increase, nominal GDP will increase. If the real output keeps the same, the price level will increase; If the price level keeps the same, the real output will increase. Thus, all the three results may occur.

49. Answer: C

From the formula Money multiplier = 1 ÷ Reserve ratio, we can see that the size of the money multipler and the reserve held at the Fed has an inverse relationship, thus as the reserve rate increase, the size of the money multiplier decreases. (Credit to Nicole Zhu from Wuxi Boston International School)

50. Answer: D

A fiat money refers to the money without intrinsic value that is used as money because of government decree, like the U.S dollars.

51. Answer: D

Total money created = $3,000*/7 = $21,000
Additional new demand deposits = $21,000 - $3,000 = $18,000

52. Answer: C

Junk bonds are bonds that carry a higher risk of default than most bonds issued by corporations and governments, so they have high degrees of financial insecurity.

53. Answer: A

Market clearing refers to an equilibrium status. In a loanable funds market, it means that the total spending will be just sufficient to purchase whatever output is produced.

54. Answer: B

Present value = Future value/(1+ annual interest rate)^n [n=number of years]. Thus, if future value is fixed and equls to $100, when interest rate increases, the present value will be lower. (Credit to Bin Liu from Beijing Etown Academy)

55. Answer: C

Present value = Future value/(1+ annual interest rate^)n [n=number of years]. Thus, if future value is fixed and equls to $200, when interest rate increases without limit, the present value will approach zero.

(Credit to Bin Liu from Beijing Etown Academy)

56. Answer: D

Future **value** = present value * (1+interest rate)^n, so if the interest rate is positive, future value of a payment will always exceed the present value, so A and C are correct. Normally, Consumption is no more than income, so if a person wants that the current consumption is beyond the current income, it needs a payment of interest rate. Hence, B is also correct.

57. Answer: B

Corporate bonds are IOUs issued by firms that allow investors to buy in order to raise finance, that is, firms pursue debt financing. Equity finance is that firms issue stocks or shares in the stock market, not bonds. Government loans and subsidy programs are not related to the bond market. (Credit to Bin Liu from Beijing Etown Academy)

58. Answer: A

The quantity theory of money: PY=MV. When both velocity (V) and real output (Y) are constants, that means prices (P) and the quantity of money (M) are highly related. Since velocity and real output are fixed, so B and C are incorrect. Prices are also not fixed because they can change when the quantity of money changes. (Credit to Bin Liu from Beijing Etown Academy)

59. Answer: D

Fiat money is a government-issued currency that is not backed by a commodity such as gold. Fiat currency can become worthless if governments print too much of it, like in the case of 1920s Germany. The country was saddled with huge debts and economic sanctions following its World War I defeat, which the government tried to pay through the mass printing of banknotes. By November 1923, $1 was worth 4,210,500,000,000 marks. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

60. Answer: B

A mutual fund is a type of financial tool for a pool of money collected from many investors to invest in securities like stocks, bonds, money market instruments, and other assets. These funds give small or individual investors access to parts of bonds, and other securities. (Credit to Nicole Zhu from Wuxi Boston International School)

61. Answer: C

Bartering is the exchange of goods and services between two or more parties without the use of money. It is the oldest form of commerce. Individuals and companies barter goods and services between each other based on equivalent estimates of prices and goods. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

62. Answer: A

A recession can be defined as a sustained period of weak or negative growth in real GDP (output) that is accompanied by a significant rise in the unemployment rate. To get out of this period, offering lower discount rate will encourage business to increase output. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

63. Answer: A

According to the equation of exchange, M (money supply) * V (velocity of money) = P (price level) * Y (real output), so the average price of goods in this case = (M*V)/Y = ($300*3)/1000 = $0.90.

64. Answer: B

When the interest rate falls, it will bring less gain by holding interest-yielding assets. People would prefer to hold more liquid forms of money, so they can consume more goods and services. (Credit to Cuiyan Tan from Guangdong Country Garden School)

65. Answer: A

In money supply market, when money supply decreased, the market supply curve shifts inwards, increases the interest rate. Thus, the cost of borrowing increases, investment will be discouraged. When investment decreases, AD decreases and shift inwards, hence GDP decreases, A. (Credit to Jerry Jin from Wuhan Britain-China School)

66. Answer: C

The discount rate is the interest rate charged by the Federal Reserve Bank to commercial banks and other financial institutions for loans. (Credit to Nicole Zhu from Wuxi Boston International School)

67. Answer: B

Stock Price can be valued by the Present Value Formula

Present Value (PV) = Future Value (FV) / $(1+r)^n$

In this formula, it can be seen that the stock price (PV) is negatively related to interest rate (r), but positively related to Future Value (FV). (Credit to Mingming Qian from Xiang Jiang International High School)

68. Answer: A

According to the equation of exchange, M (money supply) * V (velocity of money) = P (price level) * Y (real output), M*V equal nominal GDP. Thus, If V keeps the same, a 3 percent increase in the money supply will lead to a 3 percent increase in nominal GDP. The increase in money supply does not have close relationship with tax rate and the demand for money, so B and E are incorrect. The rise in money supply will increase the supply of loanable funds, so the interest rate will decrease, C is incorrect. An increase in money supply may encourage firms to invest more and hire more people, so unemployment rate will decrease.

69. Answer: A

Additional loans include two parts: existing excess reserve and new excess reserve (sold bonds). Existing Excess Reserve can be calculated from difference between Total Reserve and Required Reserve (\$200-\$800 x 10% =\$120), and Newly Excess Reserve (Sold bond) values is \$50. Therefore, the Answer: is \$170 (=\$120+\$50)

70. Answer: C

The net present value is the present value of current and future benefits minus the present value of current and future costs. The net present value for Bill if he goes to school could be calculated by $\$100,000/(1+10\%)^2-\$10,000=\$72,645$.

8-Macroeconomics Policies

71. Answer: A

Economic growth caused by supply-side factors means the aggregate supply will shift outwards. This can be achieved through an increase in quantity or quality of resources. Choice A (Lower tax rates on income) can be regarded as supply side cause because Lower tax rates on income could give workers incentive to worker harder and longer due to higher disposal income. Therefore, the labor productivity could improve and then leads to AS shifts outwards. Choice B and C could boost economic growth while Choice B and C are demand-side factors. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

72. Answer: D

A: Fiscal balance = government revenue (tax) - government spending. In recession, government should use expansionary fiscal policy (decrease in tax or increase in government spending) to boost economy, thus fiscal balance would be in deficit. Therefore, maintaining fiscal balance in a recession might worsen the economy. A is wrong.

B. Automatic stabilizers are government policies already in place that promote deficit spending during recessions and surplus budgets during expansions. These policies prevent recessions from becoming depressions. B is wrong.

C. Multiplier of fiscal policy refers to an increase in government spending will engender further spending, and have larger increase in real GDP. However, when the economy is at full capacity, which means the economy is producing at LRAS, larger government spending will lead to increase in AD and only lead to inflation, real GDP will remain unchanged. Multiplier cannot function well. C is wrong

D. fiscal stimulus means expansionary fiscal policy, including two tools: increasing government spending or cutting tax. D is correct. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

73. Answer: B

Moral hazard is a situation in which one party gets involved in a risky event knowing that it is protected against the risk and the other party will incur the cost. It arises when both the parties have incomplete information about each other. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

74. Answer: A

A liquidity trap is when monetary policy becomes ineffective due to very low interest rates combined with consumers who prefer to save rather than invest in higher-yielding bonds or other investments. Consumers choose to avoid bonds and keep their funds in cash savings because of the prevailing belief that interest rates could soon rise (which would push bond prices down). Therefore, a liquidity trap is more likely to appear when the demand for interest rates is perfectly elastic.

75. Answer: A

Increase in money supply will lead to increase in aggregate demand because monetary policy is a demand-side policy and can influence consumer consumption and investment. Thus, the AD curve shifts to the right. However, increase in AD will eventually cause rise in price level which is demand-pull inflation. If AS shifts to the left and cause inflation, this is called cost-push inflation.

76. Answer: E

Monetary policy is a demand-side policy which involves changes in the money supply or the interest rate in an economy to influence the level of total demand and economic activity. If the government wants to increase aggregate demand, it must use expansionary policy to increase money supply or decrease interest rate, so that people can have more money to spend and then increase consumption.

77. Answer: E

Traditional tools of monetary and fiscal policy require a government to adopt expansionary fiscal and

monetary policies during a recession to boost the economy by increasing AD. On the fiscal side, government should cut taxes to increase disposable incomes and encourage private sector spending, while increasing public spending at the same time, both of which aiming at increasing AD. On the monetary side, the central bank should lower interest rates to lower costs of borrowing (or incentive to save), while increasing money supply, both of which aiming at encouraging spending and increasing AD. (Credit to Wenbin Zheng from HD Qingdao Wanda School)

78. Answer: C

An investment tax credit will make a firm pay off fewer taxes, and encourage it to invest more in its business.

79. Answer: C

Spending multiplier = 1/MPC = 1/(1-MPC) = 1/(1-0.6) = 2.5
The fall in GDP = 500*2.5 = $1,250 billion

80. Answer: D

If the Federal Reserve substantially increases its selling of securities on the open market, people tend to buy these securities and save more money in banks, instead of consuming goods or services. Therefore, the aggregate demand may decrease, so the AD will shift from c to d.

81. Answer: C

GDP (Y) = S + C + G, so S = Y - C -G or S = (Y - T - C) + (T - G). (Y - T - C) represents private saving, while (T - G) represents public saving. If taxes (T) are reduced with no change in government spending (G), public saving (T - G) will decrease; If people consume all the money from the tax cut, private saving (Y - T - C) will not change. Therefore, the total national savings will decrease, causing the reduction of the supply of loanable funds, so the interest rate will increase.

82. Answer: C

If the federal government decreases tax rates, firms would have more disposable income to expanse their businesses, causing more money in the economic system, so aggregate demand curve will shift to the right. When businesses expanse, more individuals will be hires, resulting in the reduction of unemployment. Phillips curve reflects a negative relationship between unemployment and inflation, so a reduction in unemployment will lead to a move up the Phillips curve.

83. Answer: D

Crowding-out effect is an economic theory arguing that rising public sector spending drives down or even eliminates private sector spending. The sheer scale of this type of borrowing can lead to substantial rises in the real interest rate, which has the effect of absorbing the economy's lending capacity and of discouraging businesses from making capital investments. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

84. Answer: D

Reducing taxes thus pushes out the aggregate demand curve as consumers demand more goods and services with their higher disposable incomes. Supply-side tax cuts will shift aggregate supply to right because the price level for a supply of goods will be reduced, which often leads to an increase in demand for those goods. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

85. Answer: B

Infrastructure spending comes directly from state and local governments are mostly spend on roads, buildings, railways, and schools. For example, Investment on education will decrease cost of business on training and increase labor productivity of business. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

86. Answer: D

Automatic stabilizers are ongoing government policies that automatically adjust tax rates and transfer payments in a manner that is intended to stabilize incomes, consumption, and business spending over the business cycle. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

87. Answer: B

The crowding-out effect is when government tries to increase expenditures to boost economy, but government runs budget deficit, so it has to borrow money to finance spending, which will push up interest rate and reduce investment by firms. (Credit to Cuiyan Tan from Guangdong Country Garden School)

88. Answer: B

Sweeping decreases in income tax rates indicates expansionary fiscal policy, which helps to increase consumption by households since they will have more disposable income due to tax cut. Higher consumption will lead to greater demand for money, pushing up interest rates. (Credit to Cuiyan Tan from Guangdong Country Garden School)

89. Answer: B

Loose monetary policy refers to decrease in interest rate and decrease in exchange rate and increase in money supply to boost aggregate demand. Thus, higher AD leads to lower unemployment rate. And besides, Low interest rate will lead to lower borrowing cost for firms and encourage firms to borrow more, investment and stock market activity will increase. An easy bank credit means that people borrow money more easily, so people tend to borrow more money to buy houses. And low inflation will generate optimism about macroeconomic environment, leading to further more borrowing and more investment in housing industry and stock market. Therefore, all these factors contribute to the housing bubble and stock market bubble in 2008. (Credit to Li Zhang from Guangdong Experimental High School AP International Curriculum)

90. Answer: E

The Federal Reserve raised the target federal funds rate only once between 2009 and 2016, it shows that the Fed wanted to keep a relatively low interest rate in order to stimulate the economy, which reveals the low growth of economy at that time.

91. Answer: B

Open market strategy is the tool that Federal Reserve uses to increase or decrease money supply. Federal Reserve can either choose decreasing reserve requirement or decrease discount rate, or to purchase government securities to increase money supply. Hence B. (Credit to Jerry Jin from Wuhan Britain-China School)

92. Answer: C

Quantitative easing (QE) is often implemented when interest rates hover near zero and economic growth is stalled (such as situation in post-recession era). Central banks have limited tools, like interest rate reduction, to influence economic growth. Without the ability to lower rates further, central banks must strategically increase the supply of money. To execute quantitative easing, central banks buy government bonds and other securities, injecting bank reserves into the economy. Increasing the supply of money lowers interest rates further and provides liquidity to the banking system, allowing banks to lend with easier terms.

93. Answer: A

A reduction in federal funds rate will stimulate the economy and causes inflation. Consumers will be incentivized to consume now as their money will be of less real value in the future. In other words, the opportunity of consuming now is decreased.

94. Answer: D

In the short run, a decrease in income tax rates will encourage individuals to consume more or encourage firms to invest more, causing an increase in money within the economy system. An increase in sales of government securities will lead to a decrease in money within the economy system. Therefore, two policies in D have opposite effects on short-run economic activity.

95. Answer: A

In the SR:

If Federal Reserve engages in open market purchases, then money supply increases. interest rate decreases so investment increases.

Price level increases and output increases in the SR

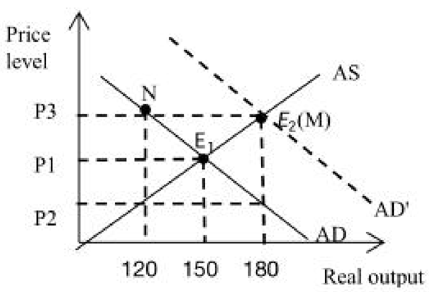
In the long run:

SRAS shift left

Price level increases but output stays the same compared with initial situation.

SRPC shifts right

96. Answer: A



Original equilibrium: E1, P1, 150

In order to move the economy to a real GDP of $180 billion

New equilibrium would be P3, 180

AD shifts to AD' (shift right)

GDP increased by 180-150=30 billion

Spending multiplier = 1/0.4=2.5

Tax multiplier = MPC/MPS = (1-0.4)/0.4= 1.5

ΔG *2.5=30, so government spending increases by 12 billion.

ΔT*1.5=30, so tax decreases by 20 billion.

97. Answer: E

The central bank could raise bank reserves through open-market purchasing. The central bank's purchasing government debt will increase the monetary base and bank reserves. As a result, the federal fund rate and the interest rate in the economy will decrease. This will not affect the reserve requirement, the money multiplier, and the discount rate.

98. Answer: E

Because the government wants to have the balance budget, the government should increase or decrease the same amount government spending and taxes at the same time. We eliminate choices A, B and C. Due to the spending multiplier is larger than tax multiplier, an increase in government spending of x dollars that is matched by an increase in the tax revenues of x dollars results in an increase in real GDP of x dollars. Based on the same reasoning, a decrease in government spending of x dollars that is matched by a decrease in the tax revenues of x dollars results in a decrease in real GDP of x dollars. Because the economy is operating above the full employment output level, the economy is in the inflation, the government should conduct contractionary fiscal policy. Choice E is the right answer.

International Economics and Current Events

1-International Trade

1. Answer: B

We can see from the graph that the world price of microwave is actually lower than that of North Korea. Therefore, if North Korea imports microwaves, they will be able to buy microwaves with a cheaper price and therefore benefit from importing.

2. Answer: A

As the total surplus after international trade would be higher, North Korea is now experiencing an economic inefficiency.

3. Answer: E

From the equations given, calculate that country A’ s market has a quantity of 300 and price of 20 and that country B’ s market has a quantity of 75 and a price of 5. The final price after international trade must be between 20 and 5.

4. Answer: C

The maximum number of two products each country can produce						
	Country A		Country B		Country C	
Watermelons (X)	0	100	150	0	600	0
Grapefruits (Y)	100	0	0	100	0	300

Based on given information, we can fill some data in a chart. For producing one grapefruit, country A should give up the production of 1 watermelon (=100/100); country B should give up the production of 1.5 (=150/100) watermelons; country C should give up the production of 2 watermelons (=600/300). Thus, country A and country B have the comparative advantage in producing grapefruits, while country C has the comparative advantage in producing watermelons. Therefore, if these countries want to produce 200 grapefruits, country A should produce 0 watermelons and 100 grapefruits, country B should produce 0 watermelons and 100 grapefruits, and country C should produce 600 watermelons and 0 grapefruits.

5. Answer: C

For this graph, we can know: by producing 1 melon, Alex should give up producing 1.5 (=15,000/10,000) oranges, Jose should give up producing 2 (= 30,000/15,000) oranges. Thus, Alex has the comparative advantage in producing melons, while Jose has the comparative advantage in producing oranges.

6. Answer: A

If Britain has a comparative advantage over France in the production of cars, then the opportunity cost of producing cars in Britain is lower than in France. Britain will give up less production of other goods and services to produce cars than what France must give up. If this is the case, then there are gains for both countries from specialization and trade in cars.

7. Answer: B

Cheese	Computer		Opportunity cost of cheese	Opportunity cost of computer
10	20	Alpha	20/10=2	10/20=1/2
40	40	Omega	40/40=1	40/40=1

Omega has lower opportunity cost and comparative advantage in producing of cheese, Alpha has lower opportunity cost and comparative advantage in producing of computer. The gains from trade are based the comparative advantage. So, Choice B is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

8. Answer: D

The table of production

	Fuel	Food
U.S.	2000	1000
Brazil	1600	400

The table of opportunity cost

	Fuel	Food
U.S.	1000/2000=0.5	2000/1000=2
Brazil	400/1600=0.25	1600/400=4

The trade price is between the opportunity costs, so for the trading price make mutually advantaged trade is 1 unit of food from 2 units fuels to the 4 units of fuels. So, Choice D is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

9. Answer: E

Individual specialization refers to the process of concentrating on and becoming expert in a particular subject or skill. It means that individuals produce products which need relatively low costs for them and sell them to earn income, and then use the income to purchase other products which they don' t have the advantage to produce. (Credit to Mike Li from Wuhan Britain-China School)

10. Answer: D

	Fuel	food	Opportunity cost (fuel)	Opportunity cost (food)
U.S.A.	2000	1000	1000/2000=1/2	2000/1000=2
Brazil	1600	400	400/1600=1/4	1600/400=4

Brazil has lower opportunity cost and comparative advantage on the production fuel, U.S has lower opportunity cost and comparative advantage on the production food. The gains from trade are based the comparative advantage. So, Choice D is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

11. Answer: C

Trade makes both exporters and importers better-off. So, both exporters and importers would gain for voluntary international trade. Choice C is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

12. Answer: D

International trades would lead the country to be specialized on production. The countries around the world exchange their products and services which have comparative advantage for getting benefits. So, Choice D is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

13. Answer: C

Based on the graph, we can conclude the following functions:
for Aconia, Q(corn) = 400 - 40Q(textiles); for Zeconia, Q(corn) = 600 - 25Q(textiles).

Based on the text, without specialization and trade, Zeconia produces and consumes 16 yards of textiles, and Aconia produces and consumes 6 yards of textiles. According to functions above, Zeconia produces and consumes 200 (= 600 - 25*16) bushels of corn, and Aconia produces and consumes 160 (= 400 - 40*6) bushels of corn. Therefore, without specialization and trade, two countries can produce and consume 22 (=6+16) yards of textiles and 360 (=200+160) bushels of corn in total.

Based on the graph, Aconia can produce 400 bushels of corn or 10 yards of textiles, Zeconia can produce 600 bushels of corn or 24 yards of textiles. For producing a yard of textiles, Aconia should give up producing 40 (=400/10) bushels of corn, while Zeconia should give up producing 25 (=600/24) bushels of corn. Therefore, Zeconia has the comparative advantage of producing textiles (for 25 < 40), and Aconia has the comparative advantage of producing corn. With specialization and trade, Zeconia can produce 0 bushels of corn and 24 yards of textiles, and Aconia can produce 400 bushels and 0 textiles. Therefore, two countries can produce and consume 24 yards of textiles and 400 bushels of corns in total after trade.

Thus, after specialization and trade, the production and consumption of corn and textiles rise by 40 (=400-360) and 2 (=24-22), respectively.

14. Answer: C

The opportunity cost of sewing dresses for Jill is 3/2 blankets for 1 dress, thus Jill would trade her dresses for Sarah's blankets at the price of at least 3/2 blankets for 1 dress. (Credit to Bin Liu from Beijing Etown Academy)

15. Answer: A

The specialization in international trade requires each country to produce the good that it has comparative advantage, which means lower opportunity cost. Therefore, it will import good that it needs to produce at higher opportunity cost because the overall costs can be saved. (Credit to Herui Chen from HEFEI NO.EIGHT SENIOR HIGH SCHOOL)

16. Answer: B

	Food	Smart phone	Opportunity cost of	Opportunity cost of smart

			food	phone
Farm land	50	50	50/50=1	50/50=1
Techno land	250	500	500/250=2	250/500=1/2

So, farm land has the comparative advantage on producing food, tech land has the comparative advantage on producing smart phone. Gains from trade is based on the comparative advantage. Both countries can get benefits from the exchange. Choice B is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

17.Answer: C

Opportunity cost of producing food for farm land is 50/50=1, Opportunity cost of producing smart phone for tech land is 250/500=1/2. Choice C is correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

18.Answer: A

International trades would lead the country to be specialized on production. The countries around the world exchange their products and services which have comparative advantage for getting benefits. But many citizens have different interest in different countries and international trade also hurt domestic production and the individuals worse-off in different countries, such as domestic companies closed up and unemployment increase. For protecting domestic gain and national security, trade restrictions are made between countries. So, Choice A is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

19.Answer: C

The U.S. can produce more bushels of wheat and more tons of wool than England, so it has advantage in the production of wheat and wool.
For the U.S., the opportunity of producing one unit of wheat is 1/2 Unit of wool; for England, the opportunity of producing one unit of wheat is 1 unit of wool, which is more than that of the U.S., so the U.S. has comparative advantage in producing wheat, the England has comparative advantage in producing wool.

20.Answer: C

The terms of trade represent the ratio between a country's export prices and its import prices.

21. Answer: B

If the country has comparative advantage in the production of oil, the opportunity cost of this country in producing oil is lower, The country can get gains from export. So, Choice B is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

22. Answer: B

For the country Alpha, the opportunity cost of producing one unit of wheat is 1/2 cloth, and for the country Beta, the opportunity cost of producing one unit of wheat is 1 cloth, so the Alpha has the comparative advantage in producing wheat.

For the country Alpha, the opportunity cost of producing one unit of cloth is 2 wheats; and for the country Beta, the opportunity cost of producing one unit of cloth is 1 wheat, so the Beta has the comparative advantage in producing cloth.

They can be mutually benefit from the trade with each other. The ratio for Alpha is 1C=2W and the ratio for Beta is 1C=1W. The terms of trade should between these two ratios.

2-Restrictions on Free Trade

23. Answer: A

An import quota prevents dumping of bananas from Latin America and thus promotes domestic production. The downside of this policy would be an increase in price and a decrease in quantity consumed. The resultant price would be between the world price and the domestic price in Europe.

24. Answer: B

Explanation one: When country A imposes an import quota on goods from country B, country A's imports of goods from country B will decrease, so producers of country B will be hurt. In response to the country A's import quota, country B will also impose an import quota on country A, causing the decrease of country A's exports. Therefore, the net exports of country A will remain unchanged.

Explanation two: When country A imposes an import quota on goods from country B, in the short term, country A's imports of goods from country B decreases and country A's exports of goods remains unchanged, causing the increase of country A's net exports. A higher level of net exports means that there are more foreign buyers of goods from country A. In order to buy more goods in country A, these foreign buyers need more currency of country A, so the value of country A's currency will be higher. In the long term, goods from country A will become more expensive compared to foreign goods, resulting in a lower level of export. Therefore, the net exports of country A will remain unchanged.

25. Answer: A

Balance of payment surplus occurs when experts exceed imports.
When there is an appreciation of the exchange rate, domestic goods are relatively more expensive, so experts will decrease, causing a reduction in current account. Meanwhile, domestic residents will buy more foreign goods, domestic currency will flow into foreign exchange market, so domestic currency will depreciate. Hence, the inflation rate will decrease.

When interest rates decrease, people tend to consume more goods and services and firms tend to invest more in their businesses, resulting in more money in economic system, so the inflation rate will increase. Thus, B is wrong.

A rise in the budget deficit cannot reduce inflationary pressures, so C is not correct.

26. Answer: D

The targeted industries are usually sunrise, sunset, strategic ones which do not have competitiveness in the global market due to product of lower quality and higher price. Industries that use the products have to bear the increasing cost and lower quality. (Credit to Juliet Sun from Wuhan Britain-China School)

27. Answer: A

Aside from overall economic welling being, politicians care about other things like voting rate, preventing dumping. Restriction on imports like tariff, quota and embargo increases the probability of survival of involving domestic industries in the global market. (Credit to Juliet Sun from Wuhan Britain-China School)

28. Answer: C

Restrictions on imports reduce the supply of imported products. As the supply of these products decrease, the prices of the imported products rise. None of the other options are directly affected by import restrictions.

29. Answer: D

Goods produced domestically and sold abroad is export. Goods produced abroad and sold domestically is import. So, Choice D is the correct answer. (Credit to Mengze Lyu from Faragut school Tianjin Campus)

30. Answer: B

Trade barriers can either make trade more difficult and expensive (tariff barriers) or prevent trade completely (e.g. trade embargo). When trade barriers increase, less foreign producers will enter the domestic market, lead to the less competition to domestic producers. (Credit to Jerry Jin from Wuhan Britain-China School)

31. Answer: D

Trade deficit is an excess of imports over exports, so if United States government wants to eliminate a trade deficit, it should increase exports or decrease imports. Reducing tariffs, or encourage exports or reducing quotas may increase export, so they can eliminate a trade deficit. When the government depreciate its dollar, foreign goods are more expensive compared with domestic goods, so export will increase while import will decrease, eliminating a trade deficit.

32. Answer: B

Comparative advantage is an economy's ability to produce a particular good or service at a lower opportunity cost than its trading partners. A comparative advantage gives a company or a country the ability to sell goods and services at a lower price than its competitors and realize stronger sales margins. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

33. Answer: D

A person holds a comparative advantage when he or her can perform a task with less opportunity cost. Jami and Dale each performs a specified task and makes the total time cost reduced, which can be regarded as a trade where both sides exploit his and her comparative advantage.

34. Answer: A

If nation A can produce good X using fewer resources than another nation B does, nation A has the comparative advantage of producing good X compared with country B. If there is a technological advance in producing manufactured goods in nation A, nation A may produce manufactured goods by using fewer resources like human capital, so it may have more comparative advantage in producing manufactured goods.

35. Answer: D

International trade is the exchange of capital, goods, and services across international borders or territories. Trading-partners reap mutual gains when each nation specializes in goods for which it holds a comparative advantage and then engages in trade for other products. In other words, each nation should produce goods for which its domestic opportunity costs are lower than the domestic opportunity costs of other nations and exchange those goods for products that have higher domestic opportunity costs compared to other nations. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

36. Answer: B

Absolute advantage describes a scenario in which one entity can manufacture a product at a higher quality and a faster rate for a greater profit than another competing business or country can accomplish. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

37. Answer: A

A tariff is a tax imposed on imports, which are goods coming into a country and on exports, which are goods leaving a country. A quota sets a numerical limit on how much of a product can be imported into a country. This helps to protect producers of domestic products from facing too much competition and ultimately going out of business. Ultimately, quotas benefit and protect the producers of a good in a domestic economy, though the consumers end up paying more if the domestically produced goods are priced higher than imports. In that way, the need for labor of domestic business will increase. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

38. **Answer: E**

When the country impose tariff on imported goods, the market price will rise to decrease the domestic quantity demanded and increase the domestic quantity supplied. As a result, domestic producer surplus increases (but not maximized), domestic consumer surplus decreases, and it creates tariff revenue and deadweight loss. Domestic demand and supply curves will not change as the tariff imposed.

39.Answer: C

The price of imported movies will rise if a unit tax is imposed on them. Some people will switch to watching local movies. As the question does not indicate the price elasticity of demand for imported movies, the change in sales revenue for suppliers of imported movies is uncertain. As the unit tax for all imported movies will allow a bigger market share for local movie producers, there will be less competitive for local movie producers to survive in the market.

3-Balance of Payment

40.Answer: D

An increase in the trade surplus means the experts exceed imports in this year, resulting in an increase in current account.

A capital investment that is owned and operated by a foreign entity is called foreign direct investment (FDI). A historically high FDI cannot necessarily mean there would always have a current account deficit.

Remittance payment is an item in current account in the foreign country. An increase in remittances by a country's nationals abroad will decrease the current account in the foreign country and increase the current account in domestic country.

Official aid payment is included in current account, so an increase in the official aid payment sent to other countries means a lower current account.

41.Answer: A

A cut in income tax rates will increase people's disposable income, leading to a rise in spending on imports.
A fall in the exchange rates will make foreign goods become more expensive than before, which will decrease spending on imports.
A rise in the rate of Value Added tax will decrease people's disposable income, leading to a reduction in spending on imports.

42.Answer: C

Uganda purchases construction and mining equipment from a U.S. plant will increase the net exports, other choices will whether increase the net exports of other countries or have no effect. (Credit to Benson Yang from Wuhan Britain-China School)

43. Answer: B

Net capital outflow refers to the difference between the purchase of foreign assets by domestic residents and the purchase of domestic assets by foreigners.
Net capital outflows (NCO) = net exports (NX), Y = C + I + G+ NX= C + S + G,
so NCO= NX= C+S+G-(C+I+G)= S-I = $300 - $550 = -$250 billion.

44. Answer: A

In the loanable funds market, the supply comes from the country' s savings, both from people and government. Therefore, because people save more, the supply is greater, leading to lower equilibrium real interest rate. Lower interest rate will discourage local investors and they will look for higher return rates in other countries, making capital outflow bigger. (Credit to Herui Chen from HEFEI NO. EIGHT SENIOR HIGH SCHOOL)

45. Answer: C

Net capital outflow equals domestic residents' purchases of foreign assets minus foreigners' purchases of domestic assets. Every international transaction involves the exchange of an asset for a good or service, so net exports equal net capital outflow. (Credit to Herui Chen from HEFEI NO. EIGHT SENIOR HIGH SCHOOL)

46. Answer: E

The current account includes sales and purchases of goods and services, factor income, and transfers. The financial account includes net increase in assets and liabilities. Having known the trade surplus can not help us to deduce the surplus or deficit either in the current account or the financial account.

47. Answer: C

To balance the current account deficit, the economy should raise export and reduce import. By increasing the government spending on R&D and infrastructure, efficiency is increased, hence, the countries' export competitiveness is improved, so the goal is achieved.

48. Answer: D

Increase in a country’s current account surplus will lead to more money inflow, which has to be offset by deficit in capital or financial account, so D is correct.

4-Foreign Exchange Market

49. Answer: A

As exchange rate decreases, domestic export will increase. When firms start to produce more, they will be in the demand of labor, so that they will more labor, which results in increase in domestic employment.

50. Answer: B

The crowding out effect suggests rising public sector spending drives down private sector spending. One of the most common forms of crowding out takes place when a large government increases its borrowing, leading to substantial rises in the real interest rate, which has the effect of absorbing the economy's lending capacity and of discouraging local businesses from making capital investments. In this situation, higher interest rate will attract foreigners to invest in domestic assets, leading to a higher demand for domestic currency, so the real exchange rate will increase.

51. Answer: B

When there is a higher inflation in the United States, the real value of dollars will decrease, causing a reduction of the demand for dollars. In response to the declining demand, the supply of dollar in foreign exchange market will decline too.

52. Answer: D

If U.S. investors hold more gold exported from South Africa, the demand for South African rand would increase, causing an increase in the value of South African rand. Thus, the South African rand would appreciate, while the U.S. dollar would depreciate compared with South African rand.

53. Answer: E

When the government creates money during periods of hyperinflation, the inflationary pressure will be higher, leading to a reduction in value of domestic currency and poorer domestic investment environment. Thus, the exchange rate depreciates and domestic investment decreases.

54. Answer: D

If the world outside the U.S.A becomes increasingly unsettled politically and economically, people will invest more in American assets because the political and economic environment in the U.S.A are more stable. So, the international value of the U.S. dollar will increase, which will make American goods cheaper for domestic residents. Hence, U.S. imports will increase too.

55. Answer: D

If interest rates in Canada rise above those in the rest of the world, then there will be more investments from other countries to Canada, resulting in a higher demand for Canadian dollars, so Canadian dollar will appreciate. Thus, Canadian goods and services will be relatively expensive for foreigners, so Canadian net exports will decrease. Therefore, there may be a deficit in Canadian trade balance.

56. Answer: D

The theory of purchasing-power parity is based on a principle called the law of one price. This law asserts that a good must sell for the same price in all locations. However, exchange rates do not always move to ensure that a dollar has the same real value in all countries all the time. Reasons: 1. many goods are not easily traded; 2. tradable goods are not always perfect substitutes when they are produced in different countries.

57. Answer: E

When a government devalues its currency, domestic goods will be cheaper for foreigners, so this country will have more exports, increasing domestic employment rate. In the same time, this country will import fewer goods from other countries because foreign goods seem to be more expensive. It may rise unemployment abroad, which is not the intended consequence of this government.

58. Answer: C

Because they can be exported or imported, if the prices of these goods aren' t the same, consumers from both countries will demand certain goods from each other. Therefore, the exchange rates can' t stay unchanged. In the long run, the prices of these goods will adjust to the same level and exchange rates will therefore stabilize. (Credit to Herui Chen from HEFEI NO. EIGHT SENIOR HIGH SCHOOL)

59. Answer: C

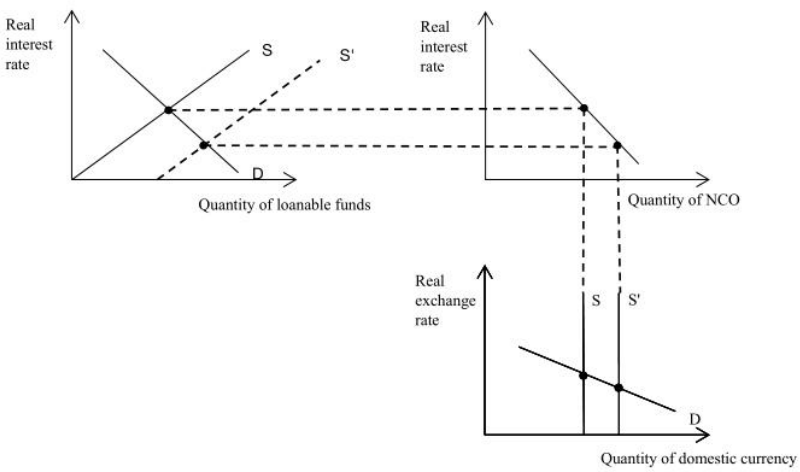
The purchasing power parity theory was propounded by Professor Gustav Cassel of Sweden. According to this theory, rate of exchange between two countries depends upon the relative purchasing power of their respective currencies. Such will be the rate which equates the two purchasing powers. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

60. Answer: A

If any speculator expects an appreciation in Japanese yen, he or she will buy more of that currency as there' s a foreseeable increase in that currency' s purchasing power in the future.

61. Answer: D

When people save more:



62. Answer: C

As more medica equipment and medicines imported from China, the demand for Chinese currency Renminbi increases. Therefore, it will increase Chinese currency Renminbi' s value, and at the same time lower US dollars value.

63. Answer: B

Real exchange rate = Nominal exchange rate * domestic price level/ foreign price level

64. Answer: A

When the central bank raises the discount rate, the money supply will decrease to drive the interest rate up. Higher interest rate will attract capital inflow, which increases the demand for domestic currency and make the domestic currency to appreciate.

65. Answer: B

The Federal Reserve will increase the money supply during the recession. When the money supply increases, the nominal interest rate decreases, which decrease the demand for the dollar, and the value of dollar is depreciate.

66. Answer: A

Expansionary monetary policy will increase the supply of money and decrease the interest rate. The lower interest in the US will cause investors to search elsewhere for a better return on their investment. In the foreign exchange market, the supply of USD will increase (and/or the demand for US$ will decrease) causing the value of USD depreciate. A depreciated USD will cause US exports to be cheaper for other countries to buy, thereby increasing US exports.

67. Answer: B

Income in Country X increases, residents will consume more and import more from Country Y, thus, they will sell home currency in foreign exchange market in exchange for currency from country Y, demand for Country Y's currency will increase and Country X's currency will depreciate.

68. Answer: A

If one country has a lower inflation rate than other countries, its goods and services are relatively cheaper than those in other countries, so its net exports will increase, causing a higher demand for its currency. Thus, its currency tends to appreciate.

69. Answer: A

When US dollar depreciates against currencies of Asian countries, the price of goods imported from Asian countries to the US rises. As Japan adopts a linked exchange rate system, i.e. the exchange rate of US dollar against Japanese Yan remains the same; the price of goods exported from Japan to the US remains unchanged. The US changes to import goods from Japan. Therefore, in the short run, Japan’s export value (in terms of USD) to the US will rise.

5-Foreign Investment

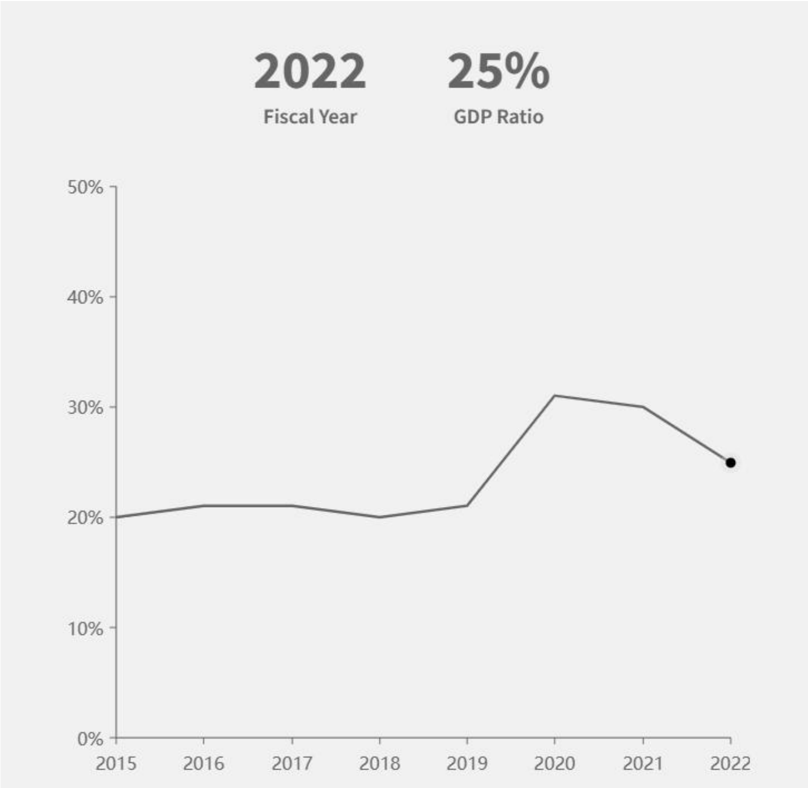
70. Answer: C

Foreign portfolio investment is the purchase of securities of foreign countries, such as stocks and bonds, on an exchange. Foreign direct investment is building or purchasing businesses and their associated infrastructure in a foreign country. (Credit to Estelle YU from Chongqing Nankai Liangjiang Secondary School)

6-Economic Common Sense and Current Events

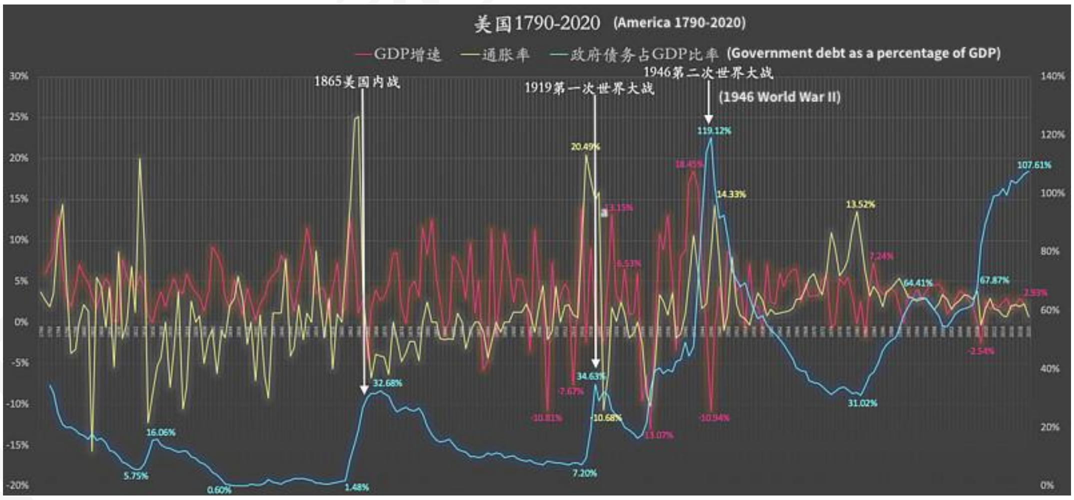
71. Answer: A

Data source:
https://fiscaldata.treasury.gov/americas-finance-guide/federal-spending/#federal-spending-overview



72. Answer: E

During World War II, the United States increased government spending substantially to support the war effort, which led to a surge in federal debt.



73. Answer: E

All states in the US have their own minimum wage laws. Some states have a minimum wage above the federal minimum wage. Certain types of laborers, including those who make tips, are exempt from these laws, and employers are legally allowed to pay them a wage below minimum wage. Their wages plus the money they make in tips, however, must be equal to or higher than minimum wage.

74. Answer: A

Daron Acemoglu's areas of research include political economy, economic development and growth, human capital theory, growth theory, innovation, search theory, network economics and learning. He has published four books: *Economic Origins of Dictatorship and Democracy* (joint with James A. Robinson), which was awarded the Woodrow Wilson and the William Riker prizes, *Introduction to Modern Economic Growth*, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (joint with James A. Robinson), which was a New York Times bestseller in 2012; and *Principles of Economics* (joint with David Laibson and John List).

75. Answer: C

Minimum spending per month = monthly fee/discount = 10/20% =$50

76. Answer: E

According to the U.S. Department of Commerce, U.S. trade deficit soared to 621 billion U.S. dollars in 2018, the highest in a decade.

77. Answer: E

Oil production in 2023 is as follows:

Top 10 Countries with the Highest Oil Production (barrels per day)

1. United States - 11,567,000
2. Russia - 10,503,000
3. Saudi Arabia - 10,225,000
4. Canada - 4,656,000
5. Iraq - 4,260,000
6. China - 3,969,000
7. United Arab Emirates - 2,954,000
8. Brazil - 2,852,000
9. Kuwait - 2,610,000
10. Iran - 2,546,000

78.Answer: D

Customs and other import duties (% of tax revenue) in United States was reported at 3.402 % in 2021, according to the World Bank collection of development indicators, compiled from officially recognized sources.
Source:
https://tradingeconomics.com/united-states/customs-and-other-import-duties-percent-of-tax-revenue-wb-data.html#:~:text=Customs%20and%20other%20import%20duties%20%28%25%20of%20tax,of%20development%20indicators%2C%20compiled%20from%20officially%20recognized%20sources.

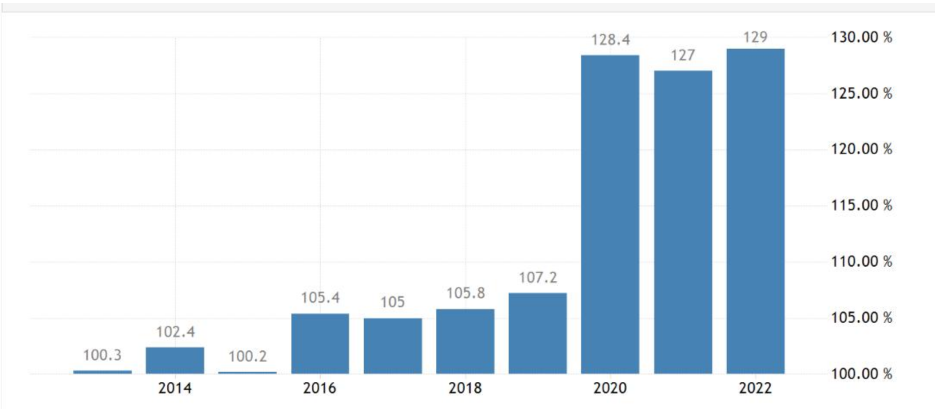
79.Answer: B

The efficient market hypothesis (EMH), alternatively known as the efficient market theory, is a hypothesis that states that share prices reflect all information and consistent alpha generation is impossible. An index fund is a type of mutual fund or exchange-traded fund (ETF) with a portfolio constructed to match or track the components of a financial market index, such as the Standard & Poor's 500 Index (S&P 500).

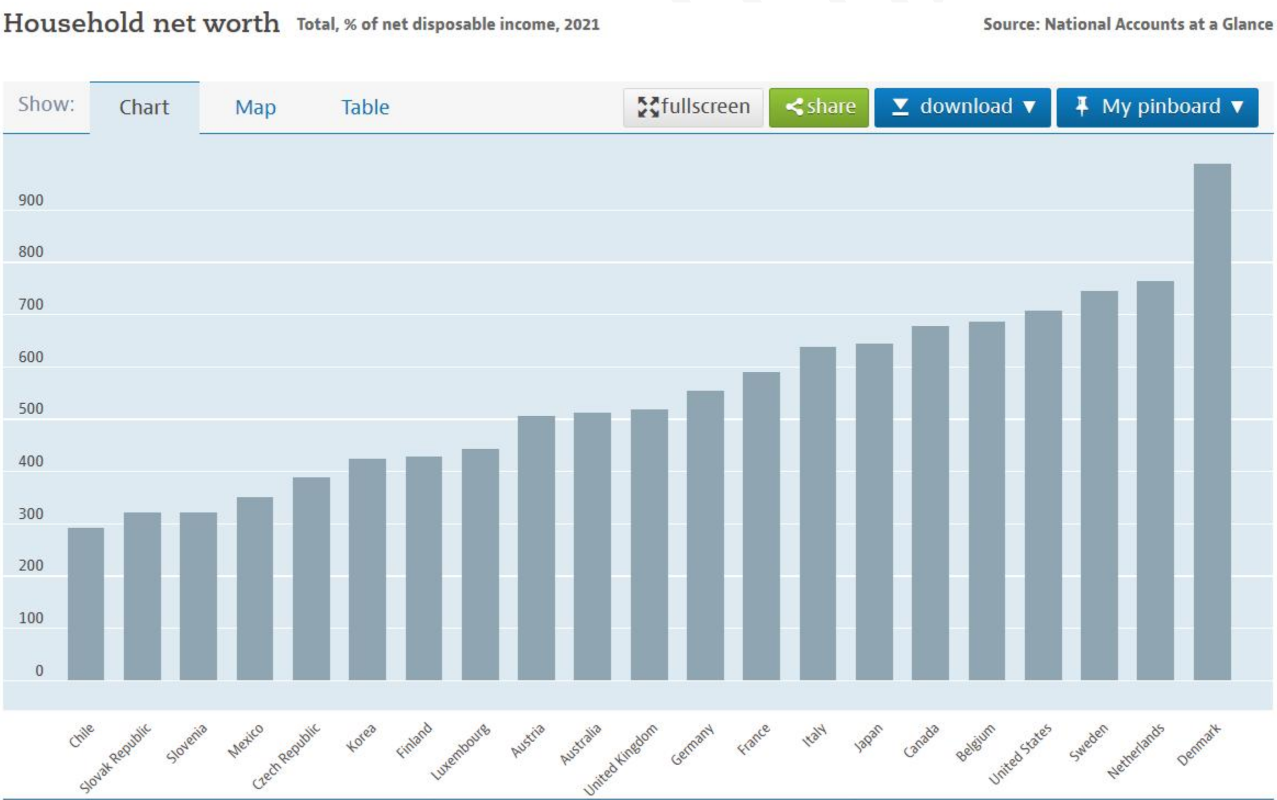
80.Answer: B

Quantitative easing (QE) is a form of unconventional monetary policy in which a central bank purchases longer-term securities from the open market in order to increase the money supply and encourage lending and investment. Buying these securities adds new money to the economy, and also serves to lower interest rates by bidding up fixed-income securities. When the Federal Reserve ends QE, interest rates will increase, decreasing the bond prices.

81.Answer: B



82.Answer: B



83.Answer: B

ATT acquired Direct TV in 2015, and it first announced plans to merge with entertainment company Time Warner back in 2016. The $85 billion deal solicited strong words from then-presidential candidate Donald Trump, who claimed the merger would put "too much concentration of power in the hands of too few."

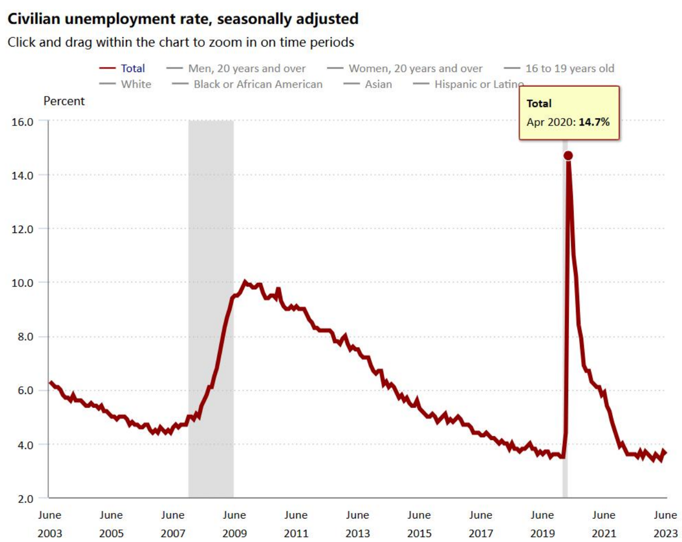
84. Answer: E

Trans-Pacific Partnership Agreement (TPPA) was signed by 12 members of Asia Pacific Economic Corporation (APEC) on 4th February 2016, after five years of negotiation. The members are Malaysia, Singapore, Brunei, Vietnam, Chile, Peru, Australia, New Zealand, Japan, Mexico, Canada and United States of America.

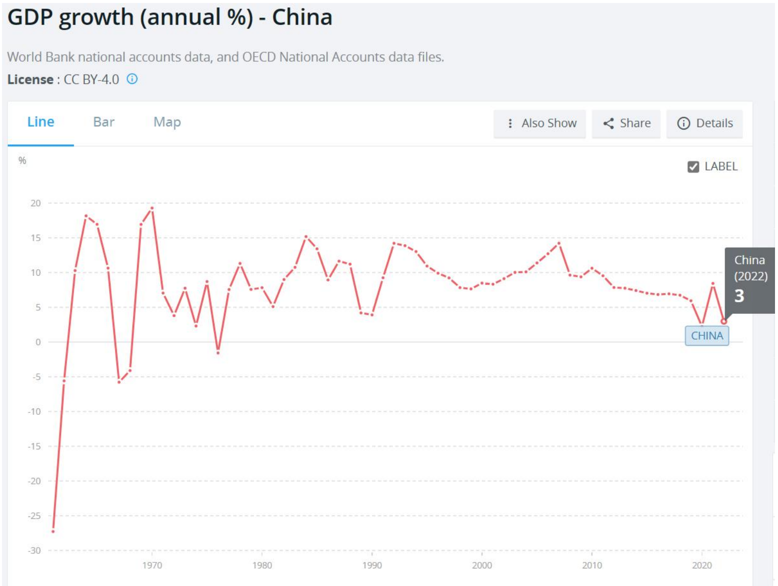
85. Answer: B

On January 29, 2016, the Bank of Japan announced that it would reduce the interest rate from 0.1% to - 0.1%, entering the era of negative interest rate. Japan was the first country in Asia to become a negative interest rate, but before that, Denmark and Sweden were both countries that experienced negative interest rates.

86. Answer: D



87. Answer: A



88. Answer: A

According to the Fortune, the revenue of Walmart globally ranked the first (as shown below).

Fortune Global 500 list of 2022 [edit]

The following is the list of top 10 companies in 2022.[5]

Fortune **Global 500 list of 2022**

Rank	Company	Country	Industry	Revenue in USD
1	Walmart	United States	Retail	$572.8 billion
2	Amazon	United States	Internet Services and Retailing	$469.8 billion
3	State Grid	China	Energy	$460.6 billion
4	China National Petroleum	China	Petroleum	$411.7 billion
5	Sinopec Group	China	Petroleum	$401.3 billion
6	Saudi Aramco	Saudi Arabia	Energy	$400.4 billion
7	Apple	United States	Technology	$365.8 billion
8	Volkswagen	Germany	Automobiles	$295.8 billion
9	China State Construction Engineering	China	Construction & Engineering	$293.7 billion
10	CVS Health	United States	Health care	$292.1 billion

89. Answer: D

Ricardo didn’t state that landlords should take wealth from labor for the good of society. What he stated was that the wages that worker receive should be judged based on the costs that labors have, their wage should be sufficient for labors to make a living at least.

90. Answer: B

Country	Brazil	South Africa	Nigeria	Kazakhstan	Indonesia
Currency	Won	Rank	Nigeria Naira	Tenge	Indonesia Rupiah

91. Answer: C

Since the mid-1970s, the U.S. imports has always exceeded the U.S. exports, leading to trade deficits. Because the U.S. dollars can be seen as a world currency, so people around the world are more willing to invest in American assets, leading to a surplus in the U.S. financial account.

92. Answer: C

Andrew Jackson was on record in opposition to the Second Bank of the United States. He argued on the one hand that no constitutional authority existed for the creation of a federal bank (the old Jeffersonian Republican argument) and on the other that the bank' s issuance of paper money was detrimental to the health of the economy. Jackson mobilized his political base by vetoing the recharter bill and, the veto sustained, easily won reelection on his anti-bank platform. Jackson proceeded to destroy the bank as a financial and political force by removing its federal deposits, and in 1833, federal revenue was diverted into selected private banks by executive order, ending the regulatory role of the Second Bank of the United States. The bank suspended payment in 1839 and was liquidated in 1841.

93. Answer: D

The war on poverty is the unofficial name for legislation first introduced by United States President Lyndon B. Johnson during his State of the Union address on January 8, 1964. This legislation was proposed by Johnson in response to a national poverty rate of around nineteen percent. In the decade following the 1964 introduction of the War on Poverty, poverty rates in the U.S. dropped to their lowest level since comprehensive records began in 1958: from 17.3% in the year the Economic Opportunity Act was implemented to 11.1% in 1973. They have remained between 11 and 15.2% ever since.

94. Answer: D

General Motors, Wells Fargo & Co., Citigroup and AIG are American companies/organizations, while Shell Oil was set up by Holland. Hence, Shell Oil did not receive bailout funds from the U.S. federal government during the 2007-2009.

95. Answer: A

In April 2023, the real GDP growth rate was 6.5% in India,5.2%in China and 1.6% in the US.
Source:https://en.wikipedia.org/wiki/List_of_countries_by_real_GDP_growth_rate#Growth_by_countries_2

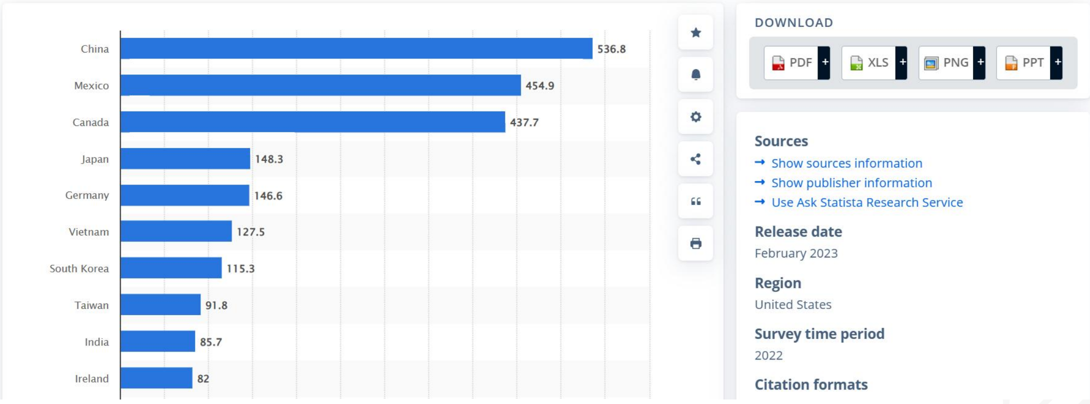
96. Answer: C

Brexit is a portmanteau of the words "British" and "exit" coined to refer to the U.K.'s decision in a June 23, 2016 referendum to leave the European Union (EU). Brexit took place at 11 p.m. Greenwich Mean Time, Jan. 31, 2020.

97. Answer: E

Ranking of the top trading partners of the United States for trade goods in 2022, by import value

(in billion U.S. dollars)



98. Answer: B

Reference:
https://www.silverdoctors.com/headlines/world-news/imf-predicts-chinas-economy-to-surge-next-year-yet-again/

99. Answer: B

The Central European Free Trade Agreement (CEFTA) is an international trade agreement between countries mostly located in Southeastern Europe. Founded by representatives of Poland, Hungary and Czechoslovakia, CEFTA expanded to Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Moldova, Montenegro, North Macedonia, Romania, Serbia, Slovenia and the UNMIK (on behalf of Kosovo, in accordance with UNSCR 1244).